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# **Notice**

This catalog is intended to supply accurate information to the reader. From time to time, certain information may be changed.

The College may revise any matter described in this catalog at any time without publishing a revised edition of this catalog. Courses, programs, curricula and program requirements may be changed or discontinued at any time. Information that appears to apply to a particular student should be verified with the Office of Student Affairs at your local campus. Local campus information is found on page 6. The publication and its provisions are not in any way a contract between the student and Ivy Tech State College.

Ivy Tech is an accredited, equal opportunity, affirmative action state college.

A copy of the most recent annual financial statement can be obtained upon request from the Office of the Treasurer.



# Message from the President

On behalf of the faculty and staff, let me welcome you to Ivy Tech State College.

The decision to continue your education is an important one that has positive implications for you for the rest of your life. In many ways, education is an investment. Better educated people earn more money, have greater job security, and better access to higher paying and professional jobs. We are very pleased that you have selected Ivy Tech as your investment vehicle.

This is an exciting time for Ivy Tech State College. Not only are we the fastest growing state college system in the state of Indiana, but our affordable tuition costs and convenient locations make us the best value in higher education today. In addition, our new Community College of Indiana partnership with Vincennes University will bring more course offerings, more choices, and increased transferability options to thousands of Hoosiers.

Today's job market is highly competitive. Only those with a solid educational background and finely honed skills will succeed. At Ivy Tech, we prepare you to advance in that environment.

You have chosen a college known for instructional excellence. Our programs are challenging and keep pace with evolving technology. Our faculty and staff care about your success as a student.

Whether you plan to transfer to a four-year institution, obtain employment, add to your training, or update your skills, Ivy Tech gives you the knowledge and the tools to meet the challenges of the future.

I wish you every success on your journey of learning.

Sincerely,



Gerald I. Lamkin, President

Ivy Tech State College

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# General Information



# How to Use this Catalog

## THIS CATALOG IS EASY TO USE.

Just take a minute to flip through it. You'll see right away that it isn't too hard to find what you're looking for. When in doubt, use the **table of contents** in the front or the **index** in the back.

## IT HAS FIVE SECTIONS.

### **General Information and College Services**

This section has basic information about the College and its campuses. It includes College history, campus addresses, and other important information such as financial aid, student rights, grading systems, and so on. Get to know this section well.

### **Degree Programs and Requirements**

Use this section to find out which classes to take to earn the degree or certificate you want. It's organized by "division" (such as business or technology), then by "program" (such as business administration or industrial technology), and finally by "specialty" (such as marketing or machine tool). You also use this section to find out what degrees are offered in a certain field and how many course credits you need to complete them. It also tells how many credits you'll earn for each course.

### **Course Descriptions**

After you look up the classes you need in section 2, you'll probably want to know what they're all about. Go to this easy-to-use section for that. Simply find the course number (see next page) in section 2 and then look it up in this section. Everything in section 3 is in alphabetical order.

### **Program Availability**

Ivy Tech offers many educational programs and degrees, but not all programs and degrees are offered at all 23 campuses. This section is designed to help you quickly find which programs are available at the Ivy Tech campus that interests you.

### **Faculty List and Accreditations**

This section is simply a list of full-time faculty and their educational backgrounds. It also shows which organizations and agencies accredit Ivy Tech State College, its campuses, and programs.

## WATCH FOR SYMBOLS AND TERMS.

A degree or certificate program requires different types of courses. There are four terms that describe course types: "General Education," "Technical," "Specialty," and "Locally Determined." Most degrees or certificates require some courses of each type. Other terms you'll see are:

**Elective** — The term "elective" means you can choose the class you want from those offered on your campus. These are marked with a **"\*"**.

**Capstone Course** — This type of course includes a component that assesses certain skills that will be expected of you as a graduate in the workforce. The assessment typically involves a written assignment. These are marked with a **"^"**.

**Locally Determined** — This means your campus decides which classes you must take to complete the degree. In cases where you see courses marked with the symbol **"\*\*"**, it means that one of two courses is required and your campus decides which. In other cases, your campus determines which courses are required to fulfill the degree, based primarily on needs of local business and industry. Your academic advisor can tell you which classes are required.

# THE IVY TECH CATALOG Navigator

This tells the name of the educational program.

This is the type of degree.

## Visual Communications

ASSOCIATE OF APPLIED SCIENCE

To earn this degree you must have 66 credits in the following areas:

General Education Core	18
Technical Core	18
Specialty Core	12-18
Locally Determined Courses	12-18

**You Must Have**

**GENERAL EDUCATION**

	Required Courses	Credit Hours
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
**MAT 111	Intermediate Algebra	3
	OR	
**MAT 112	Functional Mathematics	3
SCI 111	Physical Science	3
**	Humanities/Social Sciences Course	3
**	Humanities/Social Sciences Course	3

**TECHNICAL**

	Required Courses	Credit Hours
VIS 101	Fundamentals of Design	3
VIS 102	Fundamentals of Imaging	3
VIS 115	Computer Graphics	3
VIS 201	Electronic Imaging	3
VIS 205	Business Practices for Visual Artists	3
VIS 207	Portfolio Preparation	3

**Choose One of the Following Specialties**

GRAPHIC DESIGN SPECIALTY (30 CREDITS)		
ART 111	Drawing for Visualization	3
ART 112	Electronic Layout	3
ART 114	Graphic Design	3
ART 115	Typography	3
ART 117	Production	3
ART 217	Advanced Graphic Design	3
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This describes the course types and how many credit hours in each you need to earn the degree.

This tells how many credits you need to earn the degree.

This tells how many credits a course is worth.

This is the specialty within the degree program.

This is the course name.

This is the course number.

## COLLEGE PROFILE

In just over 35 years, Ivy Tech State College — more popularly known as Ivy Tech — has grown from a mere idea to a thriving post-secondary institution.

In 1963, the Indiana General Assembly established Indiana Vocational Technical College as Indiana's first statewide vocational technical college and appropriated \$50,000 for its development. Following the appointment of a state board of trustees, a president was named and the first training program was established in 1965. The General Assembly later authorized Ivy Tech's present structure of 14 regions to provide accessible technical educational opportunities to all Indiana citizens. Between 1966 and 1969, 13 of the 14 regions were chartered and their boards of trustees appointed. (Region 14 was approved in 2000.) Later, Ivy Tech was given authority to grant diplomas and certificates, including one-year technical certificates and two-year associate degrees, and to offer general education courses needed for its technical education programs.

Ivy Tech's growth in its relatively short history has been impressive. Enrollment reached 71,000 in 1999-00. The College had only 3,233 students in the fall of 1968. Within the statewide Ivy Tech system, more than 2,600 full- and part-time faculty members teach in program areas offered in six instructional divisions: Business, Health Sciences, Public Services, Technology, Visual Technologies, and General Education and Support Services.

The State Board of Trustees appointed Gerald I. Lamkin as the sixth president of Indiana Vocational Technical College in December 1982. In 1995, the Indiana General Assembly changed the name of the College to Ivy Tech State College.

In 1998, the Indiana General Assembly created the Community College of Indiana (CCI). The Community College of Indiana is a partnership between Ivy Tech State College and Vincennes University (VU) that will broaden the array of course and program offerings at Ivy Tech campuses, enabling students to complete two-year liberal arts degree programs. Initial pilot sites for the 2000-2001 academic year include campuses in Evansville, Gary, Lafayette, and Indianapolis. Expansion of the Community College of Indiana to all Ivy Tech locations will occur over the next six years.

## COLLEGE MISSION

Ivy Tech State College is a public, statewide, open-access, community-based, technical college. The college's mission is to enable individuals to develop to their fullest potential and to support the economic development of Indiana. Ivy Tech prepares residents of Indiana with the general and technical education needed for successful careers or for continuation in higher education. The college provides courses, degree programs, counseling and related services, technical assistance, and community service to individuals, communities, and businesses and industries across the state. Ivy Tech promotes educational mobility through partnerships with local schools and other higher education institutions.

## COLLEGE GOALS

1. To promote and expand access to programs and services that meet students' abilities, interests and potential.
2. To ensure that every graduate of an Ivy Tech program possesses the technical skills to be successful in the workplace.
3. To provide a wide range of continually improving educational programs and services to individuals, businesses, industries and communities throughout the state.
4. To contribute to Indiana's economic development by providing the skilled workforce needed to attract and retain businesses and industries.
5. To serve the diverse populations that reside in the state.

6. To promote opportunities for individuals who have the ability, potential and desire to continue their education at a four-year institution.
7. To promote mastery of the general education skills needed to be successful in higher education and in the workplace.
8. To increase educational participation in Indiana.

## IVY TECH FOUNDATION, INC.



Ivy Tech Foundation, Inc. is an Indiana nonprofit corporation established in 1969 to raise funds to serve the needs of Ivy Tech State College and its students.

The primary areas of the foundation's service are:

- Scholarships and grants-in-aid that allow students to enter the college and complete their studies.
- Loans for students who need temporary assistance until other sources of financial assistance can be obtained.
- Equipment purchases to increase the level of instructional quality in laboratories and classrooms.
- Funding for faculty enhancement opportunities and awards for excellence.
- Seed money for innovative educational programs of exceptional merit.

Ivy Tech Foundation, Inc. is exempt from federal income taxation under Section 501(c)(3) of the Internal Revenue Code. All gifts to the foundation qualify as charitable contributions for federal income tax purposes. In addition, these gifts qualify for a special Indiana state income tax credit.

## COLLEGE CALENDAR

Ivy Tech is on a semester schedule. Fall and spring semesters are 16 weeks long. The summer term is 11 weeks long. The college calendar varies by campus. Specific start and end dates can be obtained by calling one of the campuses listed on page 6.

## NON-DISCRIMINATION AND EQUAL OPPORTUNITY POLICY

Ivy Tech State College provides open admission, degree credit programs, courses and community service offerings, and student support services for all persons regardless of race, color, creed, national origin, religion, sex, physical or mental disability, age or veteran status. The College also provides opportunities to students on the same non-discriminatory opportunity basis. Persons who believe they may have been discriminated against should contact the campus affirmative action officer, Director of Human Resources, or Dean of Student Affairs.

Ivy Tech State College is an accredited, equal opportunity/affirmative action institution.

## REGIONAL ACCREDITATION STATEMENT

Ivy Tech State College is accredited by The Higher Learning Commission and is a member of The North Central Association, 30 N. LaSalle Street, Chicago, IL 60602, (800) 621-7440.

## CAMPUSES

Ivy Tech serves Indiana through a network of 23 campuses. In addition, courses are offered in communities and workplaces across the state.

**ANDERSON (Region 6)**  
104 West 53<sup>rd</sup> Street  
Anderson, IN 46013-1502  
Phone: (765) 643-7133  
1-800-644-4882

**BLOOMINGTON (Region 14)**  
3116 Canterbury Court  
Bloomington, IN 47404-0393  
Phone: (812) 332-1559

**COLUMBUS (Region 10)**  
4475 Central Avenue  
Columbus, IN 47203-1868  
Phone: (812) 372-9925  
1-800-922-4838

**EAST CHICAGO (Region 1)**  
410 E. Columbus Drive  
East Chicago, IN 46312-2714  
Phone: (219) 392-3600  
1-800-843-4882

**ELKHART (Region 2)**  
2521 Industrial Parkway  
Elkhart, IN 46516-5430  
Phone: (219) 293-4657

**EVANSVILLE (Region 12)**  
3501 First Avenue  
Evansville, IN 47710-3398  
Phone: (812) 426-2865

**FORT WAYNE (Region 3)**  
3800 North Anthony Boulevard  
Fort Wayne, IN 46805-1489  
Phone: (219) 482-9171  
1-800-859-4882

**GARY (Region 1)**  
1440 East 35<sup>th</sup> Avenue  
Gary, IN 46409-1499  
Phone: (219) 981-1111  
1-800-843-4882

**INDIANAPOLIS (Region 8)**  
One West 26<sup>th</sup> Street  
Indianapolis, IN 46208-4777  
Phone: (317) 921-4882  
1-800-732-1470

**KOKOMO (Region 5)**  
1815 East Morgan Street  
Kokomo, IN 46903-1373  
Phone: (765) 459-0561  
1-800-459-0561

**LAFAYETTE (Region 4)**  
3101 South Creasy Lane  
P.O. Box 6299  
Lafayette, IN 47905-6299  
Phone: (765) 772-9100  
1-800-669-4882

**LAWRENCEBURG (Region 11)**  
500 Industrial Drive  
Lawrenceburg, IN 47025-2971  
Phone: (812) 537-4010

**LOGANSPORT (Region 5)**  
2815 East Market Street  
Logansport, IN 46947-2152  
Phone: (219) 753-5101

**MADISON (Region 11)**  
590 Ivy Tech Drive  
Madison, IN 47250-1881  
Phone: (812) 265-2580  
1-800-403-2190

**MARION (Region 6)**  
1015 East Third Street  
Marion, IN 46953-9370  
Phone: (765) 662-9843  
1-800-554-1159

**MICHIGAN CITY (Region 1)**  
3714 Franklin Street  
Michigan City, IN 46360-7311  
Phone: (219) 879-9137  
1-800-843-4882

**MUNCIE (Region 6)**  
4301 South Cowan Road  
Muncie, IN 47302-9448  
Phone: (765) 289-2291  
1-800-589-8324

**RICHMOND (Region 9)**  
2325 Chester Boulevard  
Richmond, IN 47374-1298  
Phone: (765) 966-2656  
1-800-659-4562

**SELLERSBURG (Region 13)**  
8204 Highway 311  
Sellersburg, IN 47172-1897  
Phone: (812) 246-3301  
1-800-321-9021

**SOUTH BEND (Region 2)**  
220 Dean Johnson Blvd.  
South Bend, IN 46601-3415  
Phone: (219) 289-7001  
1-888-489-5463

**TERRE HAUTE (Region 7)**  
7999 U.S. Highway 41  
Terre Haute, IN 47802-4898  
Phone: (812) 299-1121  
1-800-377-4882

**VALPARAISO (Region 1)**  
2401 Valley Drive  
Valparaiso, IN 46383-2520  
Phone: (219) 464-8514

**WARSAW (Region 2)**  
850 East Smith Street  
Warsaw, IN 46580-4546  
Phone: (219) 267-5428

**CENTRAL OFFICES**  
One West 26<sup>th</sup> Street  
Indianapolis, IN 46208  
(317) 921-4800

**Toll-Free: 1-888-IVY-LINE**  
**Web Site: [www.ivy.tec.in.us](http://www.ivy.tec.in.us)**



# College Services



# ENTERING THE COLLEGE

## ADMISSIONS NON-DEGREE OBJECTIVE

Ivy Tech offers courses in many special career areas. Admission as a non-degree student can be achieved simply by filing a completed registration form in the Office of Student Affairs. High school students (age sixteen or greater) may take Ivy Tech courses with the written approval of the appropriate high school official. Non-degree students enrolling in general education courses must take the ASSET or COMPASS assessment for course placement. Other non-degree students may elect to take the assessment. Non-degree students are not eligible to receive financial aid.

## ADMISSIONS DEGREE OBJECTIVE

Ivy Tech is an open admissions college, accessible to all Indiana citizens past high school age. Some degree-granting programs have limited availability and have additional requirements prior to acceptance to those programs.

For admission as a student to one of Ivy Tech's programs leading to an associate degree or technical certificate, the standard requirements are a high school diploma or General Education Development (GED) certificate and an application for admission. Prospective students who are college graduates with an associate degree or higher from a regionally accredited institution may submit their college transcript in lieu of the high school diploma. Prospective students who have some college credit may submit their college transcript if the college transcript shows the high school graduation date. The Office of Student Affairs will assist the student on request in obtaining a high school or college transcript or GED scores.

To ensure student success, all degree-seeking students must participate in the ASSET/COMPASS assessment. The purposes of this assessment are to measure the student's achievement in mathematics, reading, writing, and to assist the student in the selection of appropriate courses. If the assessment reveals skill deficiencies, the student will be advised to complete appropriate developmental courses. Students may be eligible for financial aid during this period.

When the assessment indicates that the student will be better served in a different setting, that individual may be referred to an appropriate community resource offering the needed assistance. The applicant may enter the admissions process at a later date, following completion of skills upgrading.

Granting of waivers from the ASSET/COMPASS assessment is the responsibility of the academic officer or designee. Waivers will be granted to students who meet one or more of the following conditions:

- Possess an associate degree or higher from a regionally accredited college. The number of years since an associate or higher degree was earned is not relevant.
- Have completed comparable basic skills or general education courses in writing or math with a grade of "C" or better from a regionally accredited college. For purpose of waiving the reading portion, the prospective student must have completed a basic skills reading course or college-level general education course.
- Have comparable assessment scores (earned within the last two years) from a regionally accredited institution that are deemed acceptable by an Ivy Tech campus for appropriate course placement.

The College reserves the right to guide the enrollment of students in particular programs or courses on the basis of past academic records, academic counseling and assessment.

Students seeking admission to certain health occupation programs may be requested to take part in specific pre-enrollment assessments and/or interviews to fulfill college or external agency requirements. Prerequisites may be required before enrolling in certain programs.

## READMISSION

Should a course of study at the College be interrupted more than two years, students must request readmission at a later date. This may be accomplished by contacting the Admissions Office. Information on eligibility for financial aid will be available to returning students.

## LIMITED ADMISSIONS ENROLLMENT

Occasionally, the number of students admitted and enrolled in programs and/or courses may be limited by College resources or facilities—including available lab equipment and related support, or the number of available clinical work stations. The Office of Student Affairs should be contacted regarding programs which have limited access.

## ADMISSION PROCEDURES AND SUPPORT DOCUMENTS—DEGREE OBJECTIVE

All prospective students pursuing an Associate of Science, an Associate of Applied Science, Associate of Arts or a Technical Certificate are required to:

1. submit an Application for Admission

2. provide one of the following:

A. For high school graduates:

(1) if they are high school graduates from public schools, home schools, private schools or high school correspondence schools, provide an official high school transcript consisting of courses and grades received, graduation date, and official signature and/or seal. If the prospective student cannot provide an official transcript because the high school no longer exists and/or records are no longer available, the prospective student must provide written documentation to that effect.

An Indiana certificate of completion is not the same as a high school diploma. If they only have a certificate of completion, they are considered non high school graduates for purposes of admissions, or

(2) if they possess an associate degree or higher, they may provide an official college transcript from a regionally accredited college indicating date of college graduation, or

(3) if they are less than associate degree college graduates or college transfers, they may provide an official college transcript from a regionally accredited college indicating date of high school graduation (transcripts from non-accredited colleges are unacceptable).

B. For non high school graduates:

(1) they may submit an official GED report of passing test scores from the American Council on Education (ACE). High school equivalency exams provided by other organizations are not acceptable, or

(2) they may demonstrate the Ability to Benefit from postsecondary education by obtaining a passing grade on a test recognized for this purpose by the U. S. Department of Education. Students admitted to Ivy Tech under Ability to Benefit guidelines must provide an official GED report of passing test scores or a high school diploma within one calendar year of their initial date of enrollment. Students admitted under this provision who do not meet these requirements will be switched to courses-only status after a calendar year and are no longer eligible for federal, state, or institutional financial aid. A student cannot graduate from Ivy Tech (with the technical certificate or associate degree) without proof of high school graduation or passing GED scores.

Students who do not meet B1 or B2 should be referred to the appropriate College or community services.

3. submit financial aid forms (if applicable)
4. comply with international student requirements (if applicable)
5. submit other necessary specific data (if applicable)
6. participate in the academic assessment.

Applicants desiring admission to some programs may be required to meet special enrollment requirements including, but not limited to, pre-enrollment assessment testing, satisfactory high school grades, evidence of potential for success in the field, and/or an enrollment interview. Once a program selection is made, certain prerequisites, including, but not limited to, health examinations, may have to be met prior to enrollment in the particular program or course.

## ADVANCED STANDING

Students may be allowed to enter programs with advanced standing. Prior education and formal training may be considered for advanced placement. Credit may be awarded through transfer of credit from other postsecondary institutions, challenge examinations, the College Level Examination Program (CLEP), Advanced Placement (AP) tests, DANTESTS, or military experience. A score equivalent to a grade of "C" or higher on the CLEP or DANTESTS tests is required and a minimum score of 3 is required on AP tests.

## SECONDARY INITIATIVES

Ivy Tech State College has implemented a secondary/postsecondary 2+2+2 education partnership with Indiana State University and high schools across Indiana. The partnership is designed to attract high school students into a technical education pathway that will lead to an associate degree, a baccalaureate degree, and even a graduate degree. The initiative has as a goal to change the way that younger Hoosiers, their parents, and educators view education and careers in technical fields.

Articulation pathways have been established to link secondary programs in areas such as electronics, business administration, automotive technology, and design technology with the associate-baccalaureate articulations in place between Ivy Tech and ISU. High school students may formally enter the 2+2+2 program in their junior year. The 2+2+2 programs will provide students with options to learn skills to go directly to the workplace, or other opportunities to complete a degree program in a timely manner.

Ivy Tech State College's Pathway to College program is a collaborative college preparatory project for secondary students in technical programs. Pathway to College coordinators offer students opportunities for remedial and enrichment services, dynamic educational and career planning, and linkages to baccalaureate programs in technical fields. The Pathway to College program goals address Indiana students' needs for better success in higher education. Each of the goals is designed to help students focus direct attention on the importance of schooling as their highest priority. Interested parties should contact the local Ivy Tech campus.

## TRANSFERRING TO THE COLLEGE

The College encourages students who previously attended other accredited colleges and universities or adult education programs to forward transcripts to Ivy Tech by the midpoint of the first semester of enrollment or re-enrollment for consideration for transfer of credit and/or advanced placement. Students are responsible for providing pertinent course descriptions and/or copies of the college catalog(s) if further documentation is needed to facilitate the review. The College will be glad to assist individuals with evaluation of prior educational experiences. The College reserves the right to refuse admission to those students who were dismissed for disciplinary reasons from other colleges or universities.

## INTERNATIONAL STUDENTS

International students must meet College admission standards and certain other requirements. International students should apply for admission to Ivy Tech at least 90 days prior to the beginning of the term they wish to attend. International students must provide high school transcripts, which are subject to an equivalency evaluation. They must also demonstrate English language proficiency. The Test of English as a Foreign Language (TOEFL) with a minimum score of 550 for the written exam or 213 for the computerized version is required.

International students must provide proof of adequate financial support for College fees and living expenses for each year while attending Ivy Tech. International students should submit a letter from an appropriate sponsor, government official or bank official stating that sufficient funds are available to cover the cost of the student's education and that these funds will be available to the student while attending college in the United States. International students must purchase the College's insurance coverage for medical, accident and repatriation expenses.

## STUDENT ORIENTATION

All new degree students are encouraged to participate in a student success seminar/orientation program prior to or during the first week of classes. Orientation is designed to assist students in making the transition to a college environment. Topics include registration procedures, career and employment services, financial aid, business office services, instructional programs, tutoring services, college activities, and policies and procedures.

## TEST-OUT PROCEDURES

Test-out policies vary from program to program. Students wishing to test out of a course should contact the program advisor. A fee of \$10 per credit hour (subject to change by the State Board of Trustees) may be charged for the tests.

The general guidelines for test-out are:

1. Test-out examinations should be taken before registering for the course for which the test-out is attempted.
2. Test-out examinations are normally completed at one sitting (unless the test is offered in two parts, e.g., lab and written exams).
3. Test-out credits are not included in credit computations for financial aid programs or student grade point averages.

# **REGISTRATION**

## REGISTERING FOR COURSES

The registration process includes financial aid and program advising, selection of courses and payment of fees. Newly admitted students will be notified when to register for their first classes. Specific days are set aside for registration before the beginning of each semester. Students should seek assistance in course selection from faculty advisors or advisors in the Office of Student Affairs before registering for classes. The Office of Student Affairs can supply information concerning registration.

Note: Students are registered when fees have been paid or payment arrangements have been made.

## OPEN/LATE REGISTRATION

Open registration is held before the beginning of the term. Registration after the first day of classes each term is considered late. Students may register after the first week of classes with the permission of the instructor. However, a late registration fee may be assessed any time after the first day of classes. For further information contact the Office of Student Affairs.

## COURSE DROP AND ADD

A student may drop or add a course in the first week of the regular semester. Students may be eligible for a full or partial refund of the assessed fees for courses dropped in the first four weeks of the semester. Courses are not officially dropped until the necessary forms have been completed and returned to the Office of Student Affairs. After the first week of the semester students must receive the permission of the instructor to register for an added course.

## STUDENT WITHDRAWAL

From the beginning of the second week to the end of the week marking the completion of 75 percent of the course, a student may withdraw from a course by filing a change of enrollment form at the Registrar's Office. (Students may be eligible for a full or partial refund of fees.) Records of students withdrawing from courses indicate a "W" status rather than a grade when the withdrawal process is completed. Withdrawal is complete when the necessary forms have been submitted to the Office of the Registrar. A student who ceases to attend class after the last day to withdraw will receive a grade commensurate with course requirements.

Note: Withdrawing from class may affect or cancel financial assistance. Further information is available from the Financial Aid Office.

## **COLLEGE FEES**

The College seeks to provide quality education at the lowest possible cost. General fees are based on the number of credit hours for which the student has registered. Out-of-state students pay an additional fee per credit hour. For a current schedule of fees and further information, contact the Office of Student Affairs. Students or their families may be eligible for federal tuition tax credits in accordance with the Taxpayer Relief Act of 1997.

## ADDITIONAL EXPENSES

The following additional expenses may apply, depending upon the program of study:

**Books:** All students are expected to purchase the textbooks for their respective programs. The cost of books varies by class.

**Tools:** The College furnishes major equipment items for instruction. However, in many programs or courses, students must furnish additional hand tools and equipment.

**Uniforms and other special equipment:** Several programs require students to furnish uniforms and special safety clothing.

**Charges for consumable instructional materials:** In some courses an additional charge for instructional materials may be required.

## PAYMENT OF FEES

All enrolled students must make arrangements at the time of registration to pay all applicable fees. A student is officially registered and allowed to attend classes when all fees have been satisfied or arrangements for payment have been made.

## REFUND POLICY

Students choosing to drop a course or courses must notify the College in writing using the drop-and-add or withdrawal form. Students choosing to withdraw from all courses may begin the withdrawal process in writing or by contacting the office responsible for accepting official oral notification. The fee refund for voluntary withdrawal from a class, when applicable, will be processed only after the student files a drop-and-add or withdrawal form with the Registrar's Office.

The College will refund student fees, with the exception of the late registration fee, on the following schedule for a regular semester:

From registration to end of first week of semester . . .	100% refund
To end of second week of semester . . . . .	75% refund
To end of third week of semester . . . . .	50% refund
To end of fourth week of semester . . . . .	25% refund
After fourth week of semester . . . . .	No refund

This schedule is based upon a 16-week semester calendar. Classes based on different calendars will have different refund schedules. The effective date for calculating the fee refund is the date of written notification on the drop-and-add form. Certain other fees may be refundable. Further details are available from the Office of Student Affairs. All refunds will be issued by check and mailed to the address shown on the student's registration form. Cancellation of credit courses by the College will result in a total refund of fees collected for those courses.

Federal regulations mandate the treatment of refunds for financial aid recipients. Financial aid funds must be returned to the government when College charges were paid by financial aid and a refund is given a student who fully withdraws from the College. Financial aid recipients may request more detailed information from the Financial Aid Office.

## **FINANCIAL AID**

Ivy Tech participates in various types of federal and state financial aid programs that provide assistance to many students. Ivy Tech also provides financial assistance to students from its own resources. Students are encouraged to carefully explore all financial aid options at their campus.

Students must complete the Free Application for Federal Student Aid (FAFSA) to be considered for any form of financial aid. Financial aid is available for both full- and part-time students regardless of age, race or sex. To qualify for financial aid all applicable requirements must be met. For federal and state financial aid programs students must:

- Be a regular student enrolled or accepted for enrollment in an eligible program;
- Not be enrolled in secondary school;
- Be a U.S. citizen or national or permanent resident;
- Maintain satisfactory academic progress in a course of study;
- Not owe a refund to a federal grant or loan program.

Students who have completed the FAFSA and submitted all required documentation will receive an award letter detailing the financial aid programs offered. Any additional documentation required for an award or instructions for receiving payment will be mailed to the student. Procedures for obtaining federal loans vary by campus. Your campus financial aid office will instruct you on how to apply for federal Stafford loans. Detailed information on all financial aid programs is available at your campus financial aid office.

The following forms of financial aid are available to Ivy Tech students:

### **Hoosier Scholarship Program**

The State Student Assistance Commission of Indiana may award from one to three scholarships per high school, based on the size of the graduating class. Candidates are nominated by their high schools. The Hoosier Scholarship is a one-time, non-renewable merit award in the amount of \$500 for one academic year.

### **Higher Education Award Program (HEA)**

Residents of Indiana may apply for Higher Education Awards (formerly called State Grants). Applicants must file the FAFSA by March 1 preceding their enrollment for the following fall semester. Awards are based on demonstrated financial need. Recipients of HEA awards must be enrolled full-time (12 hours or more per semester) to be eligible to receive the grant.

### **Ivy Tech and Foundation Scholarships**

Ivy Tech awards scholarships provided by Ivy Tech Foundation and local civic and service organizations. Students should contact the Financial Aid Office for details concerning availability of these scholarships.

### **21st Century Scholars Program**

Twenty-first Century Scholars may use their tuition scholarships at Ivy Tech. Students must complete the award affirmation and other required forms provided by the 21st Century Scholar Program office to receive the award by the specified deadline. Questions regarding this program should be directed to the 21st Century Scholars Program or the campus financial aid office. All 21<sup>st</sup> Century Scholars are eligible for other special types of assistance as well. Please contact the Office of Student Affairs for additional information regarding the 21<sup>st</sup> Century Scholars Program.

### **Federal Pell Grants**

The largest financial aid program at Ivy Tech is the Federal Pell Grant program. This program provides grant funds for tuition and books for many Ivy Tech students. Since the grant is based on the student's need, enrollment status, cost of education at Ivy Tech and current level of federal funding, the grant amount varies from semester to semester and student to student.

### **Indiana National Guard Supplemental Grant**

The State of Indiana will meet 100 percent of certain tuition costs for eligible members of the Indiana Air and Army National Guard. The students file the Free Application for Student Aid between January 1<sup>st</sup> and March 1<sup>st</sup> of the year they intend to enroll in College.

### **Indiana Part-Time Grant**

Residents of Indiana may be eligible for the Indiana Part-Time Grant. Applicants must file the FAFSA and be enrolled in at least 6 credit hours, but less than 12 credit hours and have completed at least 12 semester credits toward a one or two-year degree completion. Awards are based on demonstrated financial need.

## **Federal Supplemental Educational Opportunity Grant (FSEOG)**

FSEOG is a federally funded student aid program which enables colleges to make grants to financially needy students to assist in the payment of educational costs. Awards vary each year.

### **Ivy Tech Grant Programs**

Ivy Tech provides an extensive grant program. Each campus has a fee remission grant fund for students with special needs arising from unusual circumstances. Fee remissions are available under three separate programs:

- Ivy Tech Grant—Awarded on basis of need
- Ivy Tech Scholarship—Awarded on basis of merit
- Part-Time Scholars Opportunity Grant—Awarded on basis of need to part-time students

# **EMPLOYMENT AND LOANS**

## FEDERAL WORK STUDY PROGRAM

The Federal Work Study Program provides part-time employment to students who need financial assistance. Applicants must file the FAFSA and must be enrolled for at least six credit hours. Job assignments may be within the College or in public non-profit agencies in the community. The Financial Aid Office directs job placements after taking into consideration the amount of students' financial need, class schedule, and family or personal obligations. The starting hourly rate will be at least the federal minimum wage. Employment may consist of, but is not limited to, secretarial and clerical office work, maintenance or custodial work, duties in the library or work as lab assistants. Where possible, students are offered work study assignments in areas related to their career objectives.

## STATE WORK STUDY PROGRAM

Ivy Tech participates with the State Student Assistance Commission of Indiana in a state-funded Summer Work Study Program for financial-aid-eligible students who are residents of Indiana and plan to be enrolled full-time for the Fall semester. The purpose of this program is to help students who have received state-funded grants and scholarships to meet their remaining need.

## FEDERAL STAFFORD LOANS

Low interest, federal Stafford Loans are available to eligible students who attend classes at least half-time (six credit hours). Funding for these loans is provided by lending institutions but the application process is handled completely by the Financial Aid Office. The interest rate on Stafford loans varies from year to year and students are notified of the applicable rate at time of application. Need-based, subsidized Stafford loans are interest-free during in-school and grace periods. Non-need based, unsubsidized Stafford loans require the student to pay the interest while in school or request a deferment of interest until after graduation.

Repayment of Stafford loans begins six months after graduation, or when the student's class load falls below six credit hours per semester. Each student borrower is required to attend entrance and exit loan counseling sessions. These counseling sessions are held in the financial aid office. Students are notified of the days and times these sessions are available. Loan applications will not be processed if the student has not attended the required sessions.

## FEDERAL PARENT LOAN FOR UNDERGRADUATE STUDENTS (PLUS)

The PLUS program assists parents in financing the education of their dependent children when all other types of financial assistance have been denied or exhausted. Repayment begins within 30 to 60 days after the loan is made. The federal government does not subsidize interest on these loans.

## SELECTED RESERVE EDUCATIONAL ASSISTANCE PROGRAM

Members of the U.S. Army Reserve, Naval Reserve, Air Force Reserve, Marine Corps Reserve, Army National Guard or Air National Guard may be eligible for benefits under Chapter 106 of the VA Regulations. Eligible students should contact the Office of Financial Aid for additional information and applications.

## CHILD OF DISABLED VETERAN (CDV) BENEFITS

Children of deceased or disabled veterans may be eligible for veterans' benefits.

Indiana residents who are children of deceased or disabled veterans or of veterans awarded the Purple Heart may be eligible for a fee waiver at Ivy Tech if the parent's death, disability or Purple Heart award occurred as a result of military service during wartime. Inquiry concerning this benefit may be made at the Financial Aid Office.

## POLICE AND FIRE FIGHTERS ORPHANS AND SPOUSES BENEFITS

Children and spouses of deceased, regularly paid law enforcement officers and fire fighters are eligible for a fee waiver if the death occurred in the line of duty. Children and spouses of volunteer firefighters and city or county reserve police officers who died in the line of duty also are eligible for a fee waiver. The fee waiver is granted only to full-time students under the age of 23. Certification from the appropriate agency must be presented to the College in order to obtain the fee waiver.

## VOCATIONAL REHABILITATION

Students with disabilities that may be considered barriers to employment may qualify for benefits through the Family Social Services Administration. The local office of the Division of Disability, Aging and Rehabilitative Services establishes the conditions of eligibility and awards assistance based on individual need. The division expects students to apply for the Pell Grant and other forms of financial aid through the school. However, if these resources are not sufficient to meet their needs the division may provide additional funding. Further information is available from the local office of the Division of Disability, Aging and Rehabilitative Services.

## WORKFORCE INVESTMENT ACT

Assistance in obtaining vocational training may be available through the Workforce Investment Act. Contact the local Workforce/Employment and Training Center concerning eligibility requirements.

## TRADE READJUSTMENT ACT (TRA)

The Trade Readjustment Act provides full tuition and fees, books and supplies to eligible students. Students should check with their local Department of Employment and Training Office to determine eligibility.

## EMPLOYER-FUNDED EDUCATION

Many employers pay for full or partial expenses related to courses taken at Ivy Tech when the training offered relates to the employee's job responsibilities. Interested students should contact their employers to determine if such arrangements can be made.

## UNION TRAINING FUNDS

Many unions have training funds available for members. Interested students should contact their unions regarding availability of training funds for use at Ivy Tech.

## VETERANS' BENEFITS

Students who served in the armed forces may be eligible for veterans' benefits. The Veterans Administration and, in many instances, the Department of Defense, determines eligibility. The amount of monthly educational allowance will depend on enrollment status and individual entitlement of each veteran.

Ivy Tech is obligated by law to evaluate past military and civilian training and education and award credit where appropriate. To accomplish this evaluation, veterans are obligated to provide the College with the necessary documentation of prior training and education. The evaluation must be completed within the time frame dictated by law and should be accomplished as soon as possible. Failure of the veteran to cooperate could result in VA benefits being terminated, retroactive to the first day benefits were received. The award of credit for previous training may allow the College to shorten the training program proportionately. The veteran should meet with the campus Veteran Affairs Coordinator at the earliest possible date. The veteran is responsible for attending classes and making reasonable progress toward an educational objective.

# **APPLICATION PROCEDURES FOR FINANCIAL AID**

Application forms are available in the Financial Aid Office at all Ivy Tech campuses. Because application procedures, deadlines, eligibility regulations and refund policies vary with different types of student aid programs, interested students are encouraged to contact the Financial Aid Office at their earliest opportunity. Students should allow six to eight weeks for processing most financial aid applications. Students are encouraged to apply for assistance at any time. In general the fall semester marks the beginning of the financial aid award year.

### **Financial Aid Appeals**

The following steps are recommended to students who feel they have received unfair treatment in the financial aid process:

1. Schedule a personal conference with the Director of Financial Aid to discuss and resolve the issue.
2. If Step 1 is unsatisfactory, schedule a consultation with the Dean of Student Affairs.
3. If Step 2 is unsatisfactory, schedule a conference with the Student Status Committee. This committee will make a recommendation to the Chief Administrative Officer to resolve the issue.

# STUDENT RECORDS

Ivy Tech maintains an educational record for each student who is or has been enrolled at Ivy Tech. In accordance with the Family Educational Rights and Privacy Act of 1974, as amended, the following student rights are covered by the act and afforded to all students at Ivy Tech:

1. The right to inspect and review information contained in the student's educational records.
2. The right to challenge the contents of the student's educational records.
3. The right to a hearing if the outcome of the challenge is unsatisfactory.
4. The right to submit an explanatory statement for inclusion in the educational record if the outcome of the hearing is unsatisfactory.
5. The right to prevent disclosure, with certain exceptions, of personally identifiable information.
6. The right to secure a copy of the institutional policy.
7. The right to file complaints with the Department of Education concerning alleged failures by Ivy Tech to comply with the provisions of the act. The name and address of the office that administers FERPA is

Family Policy Compliance Office  
U.S. Department of Education  
400 Maryland Avenue, SW  
Washington, DC 20202-4605

Each of these rights, with any limitations or exceptions, is explained in the Student Affairs Policy and Procedures Manual, a copy of which may be obtained in the Office of Student Affairs or the library.

At the College's discretion directory information may be provided in accordance with the provisions of the act without the written consent of the student unless the student requests in writing that such information not be disclosed (see below). The items listed below are designated as directory information and may be released for any purpose at the discretion of Ivy Tech unless a request for non-disclosure is on file.

1. Name, address, telephone number, dates of attendance.
2. Previous institution(s) attended, major field of study, awards, honors, degree conferred.
3. Past and present participation in officially recognized activities, date and place of birth.

Students may request the withholding of directory information by notifying the Registrar's Office in writing, specifying the categories to be withheld, within ten (10) calendar days from the first scheduled day of the term. Ivy Tech will honor the request for one term only. Therefore the student must file the request on a term basis. The student should carefully consider the consequences of any decision to withhold any category of directory information. Regardless of the effect upon the student Ivy Tech assumes no liability for honoring a student's request that such information be withheld. Failure on the part of a student to request the withholding of specific categories of directory information indicates the student's approval of disclosure.

In addition, student records are held in security by the College. Transcripts on file with the College from high schools and other institutions of higher education cannot be released by Ivy Tech. A student needing a transcript from high school or another college should request it directly from that institution. The Registrar's Office will assist students wishing to see and review their academic records and student files. Any questions concerning the student's rights and responsibilities under the Family Educational Rights and Privacy Act should be referred to the Office of the Registrar.

Students enrolled in Vincennes academic programs as part of the Community College of Indiana will have records on file at Vincennes University as well. Please contact the Vincennes University Registrar at 812-888-4220 for further information.

### **Dependency Provision**

Ivy Tech reserves the right, as allowed under the Federal Educational Rights and Privacy Act of 1974, to disclose educational records or components thereof without written consent to parents of dependent students as defined according to the Internal Revenue Code of 1954, Section 154 (as amended). A certified copy of the parent's most recent federal income tax form establishing the student's dependency status shall be required before any educational records or components thereof will be released to the parent of any student.

## **ACADEMIC GRADING**

The academic grading system has both grades and status codes, both of which are explained in greater detail later in this section. Grades reflect the quality of performance and level of competency achieved by students who complete a course. Formal grades are assigned at the end of each enrollment period. Instructors determine and assign grades and status based on objective appraisal and evaluation of the student's performance. Semester grade reports are sent to each student. The semester grade report is not sent to students who still owe fees.

In all courses the quality of the student's work determines the grade earned. For some courses quantity of work, speed of work, or both also are considered in determining the grade. Class participation also may be considered by instructors in awarding grades. In certain instances a status code appears on the student's record in place of a grade. Status represents a condition to which no letter grade can be assigned.

### GRADES

The quality of student performance or competency level, as determined by the instructor at the completion of a course, is indicated by a letter grade of A, B, C, D or F. Ivy Tech does not use pluses and minuses as a part of its grading system. Each designation has a numerical value per credit hour, referred to as "quality points." The meaning and quality point value per credit hour of each letter grade are shown in the table below:

Status		Quality Points Per Credit Hour
A	Excellent	4
B	Good	3
C	Average	2
D	Below Average	1
F	Failure	0

## STATUS CODES

Status codes describe the state or condition of a course on the student's record for which a grade has not been awarded. Status code indications carry no quality points. The types of status codes and the symbols used to indicate them are shown below.

### **Status**

I . . . . . Incomplete

AU . . . . Audit

S . . . . . Satisfactory

U . . . . . Unsatisfactory

V . . . . . Verified Competency

NW . . . . No-Show Withdrawal

W . . . . . Withdrawal

These status codes are used for the following reasons:

#### **I—Incomplete**

"I" designations are received by students who have actively pursued a course and are doing passing work at the end of the course but who have not completed the final examination and/or other specific course assignments.

To remove an "I" designation, a student must meet with the instructor and make arrangements to complete course requirements in a specified period not to exceed 30 days beyond the start of the following term. The instructor must submit the grade within 31 calendar days of the beginning of the following term in which the student received the "I" designation.

#### **AU—Audit**

"AU" status indicates enrollment in a course for which no grade or credit is awarded. The fees for audited courses are the same as those for courses taken for credit. Audit status must be declared no later than the end of the first week of classes with approval of the instructor or program chairperson.

#### **NW—No-Show Withdrawal**

Instructors authorize the registrar to withdraw a student from any course for which the student did not report for the first two weeks of the semester and failed to notify the instructor of intent to continue. This administrative action is reflected on the official class list. A petition for a refund with documentation for extenuating circumstances can be filed with the Business Office. Students can petition to be reinstated by receiving the approval of the instructor and completing the drop/add process.

#### **W—Withdrawal**

A "W" status code will be used for student and academic withdrawals. Student withdrawal (W) is a terminal status referring to voluntary student withdrawal beginning at the start of the third week of the course up to the end of the week marking the completion of 75 percent of the course. To be considered officially withdrawn from a course the student must file a withdrawal form with the Office of the Registrar. After 75 percent of the term has elapsed a student may withdraw (with the same result as indicated above) only if documented extenuating circumstances are submitted to and approved by the Chief Academic Officer or his/her designee.

## **S—Satisfactory**

The "S" indicates satisfactory completion of course work in situations where either a status of satisfactory or unsatisfactory (pass/fail) has been arranged by prior agreement. Requests for this type of grading must be declared at time of registration.

## **U—Unsatisfactory**

The "U" indicates unsatisfactory completion of course work in situations where either a status of satisfactory or unsatisfactory (pass/fail) has been arranged by prior agreement. Requests for this type of grading must be declared at time of registration. The "U" differs from an "F" in that quality points are not computed.

## **V—Verified Competency**

The "V" indicates satisfactory completion of course work in situations such as test-out, credit for experience or training, College Level Examination Program (CLEP), etc. Credit gained through this method may be used to satisfy degree requirements. This status is approved by the Chief Academic Officer upon recommendation of a faculty advisor following completion of necessary verification and documentation of competency.

## **Credit Hours**

Credit is described in semester hours (the number of credits taken per semester). The number of credits is determined by the demands of the course, course work and by the number of contact hours - the hours actually spent in the classroom or laboratory.

## **Credit Hours/Load**

A credit hour represents one hour of lecture, two hours of laboratory or three hours of clinical instruction per week for the semester. A three-credit-hour lecture course, for example, meets 48 hours during the semester (3 hours/week x 16 weeks). An average full-time semester class load in most Ivy Tech programs consists of 12-15 credit hours. A class load of more than 17 credit hours requires approval of the Chief Academic Officer or a designee.

## ENROLLMENT STATUS

Enrollment status is determined by registered total semester credits:

Full-time student . . . . . 12 or more credits per semester

3/4 time . . . . . 9-11 credits per semester

1/2 time . . . . . 6-8 credits per semester

Less than 1/2 time . . . . . 1-5 credits per semester

A first-year student, by definition, is one who has completed 30 or fewer semester credit hours. A second-year student is one who has completed 31 or more semester credit hours.

## QUALITY POINTS

Quality points are numerical values indicating the quality of student performance in credit courses: A=4; B=3; C=2; D=1; F=0. The quality points earned for a course equal the quality point value times the number of credits. A student who earns an "A" in a four-credit course earns 16 quality points: the quality point value (4) x the number of credits (4) = the total quality points (16).

## GRADE POINT AVERAGES

The grade point average (GPA) is a numerical indication of the student's performance in all courses in which quality points can be earned. The GPA is calculated by dividing the number of quality points earned by the number of credits earned. The term and cumulative GPA, calculated to three decimal places, will appear on each grade report.

Under extenuating circumstances a student may petition the Chief Academic Officer to exclude hours of coursework from the cumulative GPA calculation. Courses excluded from the cumulative GPA calculation as a result of a petition will not be counted as earned and cannot be used to satisfy program requirements for degree-declared students. Contact the Office of Student Affairs for additional information.

## IMPROVING A GRADE

Students, with the approval of faculty advisors, may attempt to improve D or F grades by repeating courses (allowable once in most programs). Financial aid recipients, however, should review their situations carefully since payment for repeated courses can be disallowed. Permanent student records contain complete files on all activity. The student's grade point average will reflect the highest grade earned.

## DEAN'S LIST

The Dean's List, prepared and published each term, gives recognition to degree-seeking students who achieve a minimum 3.50 grade point average in non-basic skills courses with no Ds or Fs while earning six or more Ivy Tech credits during the semester and have earned at least a total of 12 credits during their course of study.

## GRADE REPORTS

Final grades are mailed to the address on the registration form. Grade reports are not sent if there are outstanding financial obligations to the College.

## ATTENDANCE

Regular attendance is expected at scheduled class meetings or other activities assigned as part of a course of instruction. Attendance records are kept by instructors. When personal circumstances make it impossible to attend scheduled classes and activities the College expects students to confer with instructors in advance. Instructors can offer students the option of making up the material missed.

Absences may be considered by instructors in awarding grades and considering involuntary withdrawal. Students who must interrupt their Ivy Tech education to fulfill Reserve and National Guard annual tour requirements should present official military orders to their instructors prior to departure for duty. Students are not excused from completion of the course work and should make arrangements with their instructors to complete all work.

# STANDARDS OF PROGRESS

Students who have declared a certificate or degree objective and who have 15 or more cumulative credit hours attempted must maintain a 2.00 minimum cumulative grade point average (GPA) to remain in satisfactory academic standing. Students receiving financial aid must demonstrate satisfactory progress toward completion of a program within a specified time frame based on their enrollment status. Students also must successfully complete the minimum number of credit hours required for that status each semester. All students are expected to maintain a cumulative 2.00 GPA to be eligible for graduation. Questions about standards of progress and academic standing should be addressed to the Office of Student Affairs.

## SPECIAL PROBLEMS

The Office of Student Affairs is available to help with special problems, exceptional circumstances, and filing grievances (see Student Grievances). Special problems, exceptional circumstances, and grievances are ultimately the responsibility of the Chief Administrative Officer of the region, designated staff and committees.

# ASSESSMENT

It is the mission of Ivy Tech State College to enable individuals to develop to their fullest potential and to support the economic development of Indiana. To this end an assessment program is conducted college-wide to measure student progress toward educational goals, to determine academic progress, to improve teaching and learning and to evaluate institutional effectiveness. Student assessment is part of the College's educational program. What Ivy Tech discovers through the assessment program is used in making decisions about everything the College does from curriculum planning to student activities to support services. From the time students apply to the College until the time they leave, students are expected to participate in a series of tests, surveys, and evaluative activities intended to:

- Assess students' academic history and academic skills for accurate advisement and course placement at entry;
- Obtain information on students' satisfaction with College courses, programs and services through such instruments as the ACT Student Opinion Survey;
- Measure gains and competencies students have made academically while at the College through a variety of general education measures focused primarily on reading, writing, and critical thinking; and
- Demonstrate mastery of technical skills through program outcome measures such as portfolio, licensure exams and other standardized exams.

These tests, surveys and evaluative activities are used to help students achieve their individual goals and to improve college services and programs for all students. Students' earnest and sincere participation in surveys, tests, learning tasks, exit exams and portfolio development provides the College with accurate information to plan increasingly effective programs and services. In this effort students become partners in the assessment and learning process.

# GRADUATION

The Associate of Science degree, the Associate of Applied Science degree or the Technical Certificate is awarded by the College to students who meet graduation requirements. Graduation ceremonies are held once a year. Graduating students may be charged a fee to cover the cost of the ceremonial cap and gown.

A student is considered eligible for graduation when requirements for graduation have been fulfilled. Each student entering the final semester prior to graduation must complete an application for graduation. The application will be certified by the student's program advisor and forwarded to the Registrar's Office where the appropriate diploma will be prepared.

Graduating students will participate in outcomes assessments. To graduate with an Associate of Science degree, an Associate of Applied Science degree or a Technical Certificate, the student must:

1. Attain a minimum grade point average of 2.00 in the required technical and general education courses;
2. Earn 15 credits as a regular student of Ivy Tech rather than by test-out or other means of advanced placement;
3. Successfully complete the required number of credits;
4. Satisfy all financial obligations due the College; and
5. Satisfy program accreditation standards that may have additional requirements.

## TRANSFERRING TO ANOTHER INSTITUTION

Ivy Tech has articulation agreements under which students may transfer individual courses or entire programs of study to a number of public and private institutions. A student, depending on his or her goals, may choose to transfer to another college or university and pursue a bachelor's degree after completion of a series of courses or completion of a two-year degree program at Ivy Tech. Some of these agreements are collegewide and some pertain to specific campuses of Ivy Tech.

The selection of an institution for transfer should be an individual decision based upon the extent to which credits will transfer, compatibility of degree programs, location, availability of programming, philosophy, and cost of attending the transfer school. Opportunities are available to Ivy Tech students to transfer and complete a baccalaureate program as a resident or commuting student. In addition opportunities are available to pursue a bachelor's degree using distance technologies which will allow a student to complete a degree program within the home community, even at an Ivy Tech campus.



Through the DegreeLink partnership between Ivy Tech and Indiana State University (ISU), students may complete an articulated Associate of Science degree program and transfer to ISU as a junior year student. Students completing associate of science degrees in the linked programs may pursue bachelor's degrees in Electronics Technology, Business Administration, Industrial Automotive Technology, Mechanical Technology, Community Health, Manufacturing Technology and Computer Integrated Manufacturing Technology. ISU also provides more general opportunities for graduates of a variety of programs for earning a Bachelor's degree in Industrial Supervision, General Industrial Technology, and Human Resources Development. Students may complete these bachelor's programs on ISU's Terre Haute campus, and for certain programs may be able to complete the Bachelor of Science through coursework brought to Ivy Tech campuses using distance technologies. For students interested in exploring these options the Associate of Science curriculum for achieving maximum transferability is detailed in the related program descriptions in this catalog. Under the Bridge to ISU program, students who have not been accepted to the university as freshmen are referred to the local Ivy Tech where they can begin their education and later continue at ISU.



**BALL STATE  
UNIVERSITY.**



Students may pursue an articulated Bachelor of Science in Business Administration (detailed in the Business Administration program section), Bachelor of Science in Social Work (detailed in the Human Services program section), or Bachelor of Science in Family and Consumer Science (detailed in the Child Development program section) at Ball State University. Opportunities to transfer technology degree programs are also available. The Connect program provides an option for students who have not been accepted to Ball State as freshmen, under which they can enroll at Ivy Tech. Students successfully completing the Connect program are guaranteed admission to Ball State.

Students may pursue an articulated Bachelor of Science in Business Administration (detailed in the Business Administration program section) or Bachelor of Science in Radiologic Technology at the University of Southern Indiana. Opportunities to transfer into the Bachelor of Science in Health Services are also available to graduates of the Surgical Technology, Radiologic Technology and Medical Assistant programs. The Health Services baccalaureate program may be completed via distance technology.

Ivy Tech is also a member of the ABELINC project, a collaborative partnership involving selected two-year colleges across the country and Governors State University (GSU), a state university in Illinois. The ABELINC project, through its Board of Governors Bachelor of Arts (B.A.) degree program, serves adults who are mobile, work full-time, live in areas under-served by four-year institutions, and/or find it difficult to complete their baccalaureate programs through traditional campus-based programs. Students may take up to 80 credit hours at Ivy Tech that will apply toward the 120 credit hours required for the B.A. Students may complete the entire Bachelor of Arts program in their home community.

Please consult your local Ivy Tech campus about the availability of other transfer courses and programs.

## **STUDENT SUPPORT SERVICES**

### BASIC SKILLS ADVANCEMENT PROGRAM SERVICES

To ensure that every student has the opportunity to be successful Ivy Tech offers Basic Skills Advancement programs. These developmental programs are designed for students enrolled in regular programs or courses at the College who are encountering academic difficulty or who have been identified as having encountered academic difficulty in the past. Services provided through the Basic Skills Advancement program include diagnostic testing and assessment, course placement services and instruction.

The need for these services may be identified at the time of admission. However, a student may use any or all services upon encountering academic difficulty during a course of study. Professional basic skills advancement instructors and laboratory technicians provide developmental instruction in the areas of math, communications, sciences, writing and study skills. Some campuses offer GED preparation and English as a second language (ESL). Delivery of instruction may be in the form of a basic skills advancement course in a classroom setting, one-on-one tutorial assistance, computer-based instruction or a self-paced study in the Basic Skills Center. For further information about the College's Basic Skills Advancement programs contact the Office of Student Affairs or the Basic Skills Center.

### ACADEMIC ADVISING

Each campus provides advising to all interested students. Students may obtain individual advising and/or assessment to assist them in identifying their abilities or occupational interests. Counseling and assessments also are helpful in developing education and career plans. Students are encouraged to seek assistance in selecting an occupation and the necessary training from the Office of Career and Employment Services.

In addition to the advising program offered by the Office of Student Affairs the College uses a faculty advisor system. On admission each degree student is assigned a faculty advisor whose purpose is to:

1. Assist the student in course selection and program planning.
2. Guide the student in meeting the requirements for graduation as prescribed by the College.
3. Ensure that appropriate technical and general education courses are included in the chosen course of study.

## CAREER AND EMPLOYMENT SERVICES

Career and Employment Services provides many types of services to all students, some of which are career exploration, resume writing preparation, career fair information and assistance in finding part-time work while in school. Candidates for graduation who desire job placement assistance may contact the Career and Employment Services Office, which will:

1. Advise candidates of the College's career and employment services.
2. Provide occupational information, including employment trends, and local and state occupational outlook data.
3. Assist the registered candidate in preparing a packet of credentials for use in finding a job. The packet may include:
  - a. A resume of the candidate's education and employment experience, and
  - b. Personal letters of recommendation verifying the student's employability.
4. Create folders containing original copies of the candidate's credentials for all registered candidates.
5. Prepare copies of credentials released by the candidates for referral to prospective employers. Alumni may update their credentials whenever they wish to use the Career and Employment Services Office.

Students or alumni registered with the Career and Employment Services Office will be informed of employment opportunities known to the Career and Employment Services Office. Employers who register with the Career and Employment Services Office are given the names of all qualified candidates without regard to gender, race, age, national origin or disability. Registered students or alumni are eligible for interviews with appropriate prospective employers. See the Office of Career and Employment Services for additional information.

## COLLEGE BOOKSTORE

Each campus maintains a bookstore where students may buy textbooks and supplies. College sweaters, jackets, souvenirs and other items also are available for purchase.

## LIBRARY

Libraries at each campus provide access to materials, information and services that support students' educational needs. In addition libraries have career exploration materials, inter-library loan services, general and technical periodicals, recreational reading, and audio-visual materials and equipment.

In addition to print materials the College provides a variety of online databases, many of which are full-text, that are available to students at all campuses.

## DISABILITY SUPPORT SERVICES

Reasonable accommodations for persons with disabilities will be made to ensure access to academic programs, services, and employment in accordance with section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. College programs and facilities are designed to be accessible to students with disabilities. Each campus has designated parking and special restroom facilities for persons with disabilities. Disability Support Services also will aid students with disabilities with career planning, financial aid and placement. The College staff works with the Department of Vocational Rehabilitation and other service agencies to assist students with disabilities through available local community resources.

It is the student's responsibility to contact the campus Disability Services representative to request accommodations; any information shared will be kept confidential unless the student authorizes release and exchange of specified information. Requests for accommodations and documentation of disability must be received one month prior to enrollment for the next academic term. Additional time may be required for some requests. Every effort will be made to provide reasonable accommodations in a timely manner.

# **STUDENT ORGANIZATIONS**

## ORGANIZATIONS AND ACTIVITIES

The College recognizes the educational, recreational and social values of student organizations and extracurricular activities. Students are encouraged to participate in any or all phases of the student activities' program as long as participation does not interfere with studies.

All student organizations operate under the policies and guidelines set for the College by the State Board of Trustees. Approval by the Student Government and the administration is required of all student organizations seeking to make use of College facilities. All approved organizations must be open for membership to all eligible candidates and must make available to the Student Government records of officers, membership and financial transactions.

## STUDENT GOVERNMENT

Students in each region are provided opportunities to participate in student organizations through the Student Government. Student Government is the representative governing body of the students. Student Government representatives are elected or selected according to the by-laws of each regional Student Government constitution and serve as stated in those bylaws. The student body membership may consist of representatives of each program area and an advisor as established in the by-laws.

Student Government was established by students to encourage participation in student government and to promote College spirit and recognition. Student Government exercises the authority, unless otherwise delegated, to legislate on student matters subject to the approval of appropriate College administrative offices.

The constitutions of all student organizations must be approved by a quorum of the Student Government, consisting of a simple majority of the total membership and one staff advisor or as otherwise stated in the by-laws.

The functions of Student Government include:

1. Communication of bona fide concerns of the student body to appropriate College officials with suggestions for improvement.
2. Approval of student organizations beneficial to student life and worthy of being part of the College.

3. Assurance that copies of the constitution, by-laws and statement of purpose and objectives of each recognized student organization are on file in the Office of Student Affairs.
4. Referral of student grievances to the appropriate College officials.
5. Planning and conducting appropriate extracurricular student activities.
6. Submission of student activity budgets for review and approval by regional officials.

## PHI THETA KAPPA



Phi Theta Kappa is a national honor fraternity for two-year colleges. Its purpose is to recognize and promote academic excellence. This is done by providing leadership development opportunities for service in chapter activities on campus and regional Phi Theta Kappa activities. Membership in Phi Theta Kappa is by invitation only and is based on a minimum grade point average as well as completion of a specified number of semester hours. Contact the Office of Student Affairs for further information.

## INTRAMURAL SPORTS

College sports activities consist of intramural sports sponsored by Student Government. Leagues can be formed when student interest justifies their organization. All sports activities of the College must be approved and sponsored by Student Government and the administration.

## CLUBS

Students wishing to organize hobby, social or special interest clubs should submit proposals to Student Government, which will determine whether sufficient interest exists. Student Government is authorized to charter the club upon approval by the administration. Each club must have officers and a staff advisor.

## SOCIAL ACTIVITIES

All group activities of the College must be approved and sponsored by Student Government and the administration. Classes, clubs and other groups should plan and conduct social activities pertaining specifically to their members. Student Government organizes and conducts social activities and gatherings in which all students and their guests may participate.

## PROFESSIONAL AND TRADE ORGANIZATIONS

Student chapters of various professional and trade organizations are formed in the same manner as other student organizations and are subject to the same requirements.

## IVY TECH STATE COLLEGE ALUMNI ASSOCIATION

Many of the regions have established chapters of the Ivy Tech Alumni Association. Membership in the association is open to current and former students. Contact the Office of Student Affairs for further information.

## **HOUSING**

Ivy Tech is a commuter college and does not operate residence halls. However, the Office of Student Affairs may be able to respond to questions concerning housing in the community. Ivy Tech accepts no responsibility for locating, approving or supervising local student housing.

# **STUDENT PARKING**

As part of registration some campuses require students to register their motor vehicles and obtain a parking sticker. A special permit is required to park in spaces for persons with disabilities. Stickers are to be displayed in the vehicle while parked on campus, and students may park only in designated student parking areas. Vehicles improperly parked in areas reserved for the disabled, visitors or others may be towed at the expense of their owners.

# **STUDENT ACCIDENT INSURANCE**

For students registered in credit courses, the College provides accident insurance in a designated amount for injuries sustained while participating in College-sponsored activities. The activity must take place on College premises or on any premises designated by the College. Students are also covered while traveling to and from College-sponsored activities as a member of a group under College supervision. It is the student's responsibility to report injuries promptly to the instructor or to the Office of Student Affairs. The insurance is for a specified minimum amount of coverage. It is not intended to replace insurance coverage students may already have. Students should review their own coverage. The master insurance policy issued to Ivy Tech is on file at the central administrative office. The description of the hazards insured, benefits and exclusions is controlled by the master policy. Students with questions may contact the regional Office of Student Affairs.

# **STUDENT HEALTH INSURANCE**

The College has made arrangements for Ivy Tech students to obtain health insurance. Insurance coverage is purchased directly from the insurance company by the student. Application forms and brochures explaining coverage and rates are available through the Office of Student Affairs during registration periods. Coverages and rates are subject to change.

# **ACCIDENTS AND ILLNESSES**

The College does not provide a health services center. The College supports the Drug Free Schools and Communities Act of 1989. Many community agencies are available to assist students seeking counseling or treatment. Please contact the Office of Student Affairs for a listing of community resources. The College conducts a biennial review of the effectiveness of its drug and alcohol abuse prevention programs. This review is available in the Office of Student Affairs.

If a student has an accident on College property the student should report the accident to campus security or the Office of Student Affairs. If a student suffers an accident or illness while attending classes the student should notify the instructor. The College will take the necessary steps to intervene in a medical emergency while the student is on campus. If paramedic services or hospitalization is required the student is financially responsible.

If a student is suffering from an illness that makes it impossible to attend classes the student should contact his/her instructors.

# REGISTRATION FOR ELECTIONS

Students are strongly encouraged to exercise their right to vote. In order to vote in national, state or local elections one must be a registered voter at the person's current address. Students who need a voter registration form due to either not having previously registered or having moved can pick up a voter registration form at the Office of Student Affairs.

# EMERGENCY CLOSING OF CAMPUSES

Severe weather conditions or other emergencies occasionally make it necessary to close a campus. Each campus has designated local radio stations to announce information on closings.

# STUDENT RIGHTS AND RESPONSIBILITIES

## STUDENT CONDUCT

The College is committed to academic integrity in all its practices. The faculty value intellectual integrity and a high standard of academic conduct. Activities that violate academic integrity undermine the quality and diminish the value of educational achievement.

The reputation of the College and the community depends in large part upon the behavior of its students. Students enrolled at the College are expected to conduct themselves in a mature, dignified and honorable manner. Students are entitled to a learning atmosphere free from discrimination, harassment, sexual harassment and intimidation. This applies to the conduct between faculty and staff to students, student to student, and students to faculty and staff.

Students are subject to College jurisdiction while enrolled at the College. The College reserves the right to take disciplinary action against any student whose conduct, in the opinion of College representatives, is not in the best interests of the student, other students, or the College. Community College of Indiana students who are disciplined should expect to find their sanctions enforced at other Ivy Tech and Vincennes campuses.

All students are expected to abide by the following College rules of conduct.

"Student" as used refers to a student, a group of students, a prospective student or a group of prospective students.

## COLLEGE RULES

1. Assembly: College policy states that assembly in a manner that obstructs the free movement of others about the campus, inhibits the free and normal use of the College buildings and facilities, or prevents or obstructs the normal operation of the College is not permitted. Obstruction of the free flow of pedestrian or vehicular traffic on College premises or at College-sponsored or supervised activities is included in the definition of obstruction.
2. Cheating: Cheating on papers, tests or other academic works is a violation of College rules. No student shall engage in behavior that, in the judgment of the instructor of the class, may be construed as cheating. This may include, but is not limited to, plagiarism or other forms of academic dishonesty such as the acquisition without permission of tests or other academic materials and/or distribution of these materials and other academic work. This includes students who aid and abet as well as those who attempt such behavior.

3. Children on Campus: Due to insurance and security purposes, children are not allowed to be on Ivy Tech property without direct supervision by parent or guardian, with the exception of childcare centers. Children are not allowed in classrooms unless through the expressed consent of the instructor.
4. Commitment of College Funding: Committing College funding, including student clubs or organizations, without written approval and paperwork will result in the student being responsible for the money owed, the student being removed from the club or organization, and disciplinary action being evoked. No student shall enter into a contract with an outside agency using the name of the College. Contracts entered into in violation of this rule shall be the personal responsibility of the student.
5. Compliance and Identification: Students who fail to comply with direction of College officials or law enforcement officers in the performance of their duties and/or fail to identify themselves to these persons when requested to do so are subject to disciplinary sanctions.
6. Discrimination Activities: Any student involved in discrimination activities towards students or staff will face disciplinary action.
7. Disruptive Behavior: Behaviors or actions that disrupt the College's processes (academic and/or non-academic) are in violation of College rules. No student shall behave in a manner that is unacceptable in a learning environment or that endangers or infringes on the rights and/or safety of himself or herself or other students, visitors, staff, patients in a clinical situation, and/or children in childcare centers at Ivy Tech. If misconduct warrants an immediate suspension from the institutional setting for the remainder of the instructional period the instructor may do so without a prior hearing. If the student does not voluntarily leave the institutional setting campus official(s) and/or campus security officers may remove the student from that setting upon oral request by the instructor.
8. Electronic Equipment or Programs: Use of electronic equipment or programs in a manner that is disruptive to other students, staff, or College processes is prohibited. This includes electronic equipment being played loudly. Students introducing computer viruses will be subject to disciplinary action, including dismissal.
9. Financial Responsibility: Students are expected to pay all fees, fines, or loans in a timely manner. Official transcripts and copies of records will not be given to the student and degrees will not be awarded until debts to the College are paid. Students will be allowed to inspect and view transcripts and records. Students will not be allowed to register in an "owe fees" status.
10. Fundraising or Solicitation: College policy requires that individuals or organizations seeking the use of campus facilities or scheduling activities to solicit funds must first obtain written approval from the appropriate College official. College rules and regulations govern fundraising activities, the money collected, and the use of the money collected by the fundraising activities. Misrepresentation or misuse will result in the student being responsible for the money owed to an institution or individual, in the student being removed from the club or organization, and the student facing disciplinary action. The student is also accountable to state and federal laws and regulations.
11. Furnishing False Information With Intent to Deceive: Providing false information is against College rules and state laws.
12. Harassment/Sexual Harassment/Stalking and/or Intimidation: This is defined as conduct causing alarm or creating a risk by threatening to commit crimes against persons or their property or making unwelcome sexual advances or requests for sexual favors. This also covers harassment or intimidation of persons involved in a disciplinary hearing and of persons in authority who are in the process of discharging their responsibilities. Harassment, stalking, and/or intimidation are not permitted. Perpetrators are also subject to Indiana state law. Please see the policy regarding harassment at the end of this section.

13. Hazing: Hazing, an initiation process usually into a club or organization which often involves humiliating or otherwise harmful tasks, performances, or behaviors is not permitted.
14. Inappropriate Use of College Computer Resources: Theft or other abuse of computer time is against College rules, which include but are not limited to:
  - a) unauthorized entry into a file, to use, read, or change the contents or for any other purpose.
  - b) unauthorized transfer of a file, unauthorized use of another user's identification and password or use of computing facilities to interfere with the work of another student, faculty member or college official.
  - c) use of computing facilities to send, receive, or view obscene or abusive messages.
  - d) use of computing facilities to interfere with normal operation of the College computing system.
  - e) use of computing facilities for students' personal benefit.
  - f) use of College owned computer resources to prepare or print work for commercial purposes.
  - g) Inappropriate use of printers:
    1. Printers are intended for class-related activities. Printing Internet web pages or other information not directly related to an authorized use is prohibited.
    2. Excessive printing is prohibited. Students must follow lab guidelines limiting the number of copies or pages that may be printed.
    3. Using non-approved paper in a college-owned printer is prohibited.
15. Motor Vehicles: Students are expected to comply with parking regulations. Parking spaces for persons with disabilities and visitors' areas are reserved for those purposes, and vehicles improperly parked in those areas may be ticketed or towed at the owner's expense.
16. Safety: No student shall engage in behavior that violates the safety rules of any institutional setting or other College premises, and/or College sponsored events whether such procedures are written or oral rules or directions. This shall include, but not be limited to, the wearing of any required personal protective equipment and the prescribed methods and procedures for handling and disposing of certain materials that may be hazardous, unstable, infectious, etc.
17. Signs or Surveys: Students may erect signs, conduct surveys, or display signs or posters on designated bulletin boards.
18. Use of College Name: The College name and logo are registered trademarks. The use of the College name or logo must be authorized by the officials in charge of College trademarks. Use without authorization is against College rules.
19. Use of College Facilities: Students are permitted on campus during normal published Ivy Tech State College hours and at other times established in the College calendar. Students wishing to utilize College facilities at other times must request permission from the appropriate College official. Unauthorized possession, duplication, or use of keys or electronic locking devices to any College premise, or unauthorized entry to or use of College premises is against College rules.
20. Compliance with Indiana State Laws: Violation of these laws is also against College rules and violators may also be prosecuted according to Indiana law.
  - Alcoholic beverages: Consuming, being under the influence of or possessing intoxicating beverages on College property is not permitted.

- Arms/deadly weapons/explosives/chemicals: Possession of firearms (except those possessed by police or campus security officers) and other weapons, dangerous chemicals, or any explosive or explosive device is prohibited on College property or at any College sponsored activity held elsewhere. No student shall use or threaten to use firearms, other weapons, dangerous chemicals, or any explosive or explosive device on College property or at any College-sponsored activity held elsewhere. A harmless instrument designed to look like a firearm, explosive, or weapon that is used by a person to cause fear in or assault of another person is included within the meaning of a firearm, explosive or weapon.
- Assault and battery, abusive actions, physical and/or verbal altercations and /or threatening language: Assault and battery, abusive actions, physical and/or verbal altercations, and/or threatening language are prohibited under College rules. Perpetrators are also subject to Indiana State law. No student shall threaten or commit a physical or sexual attack on faculty, staff or another student. No student shall force or threaten to force another student, faculty or staff member to have sexual contact against that person's will. Any student charged with an assault on Ivy Tech State College property or at any College sponsored activity is subject to prosecution and will be disciplined under the campus code of student conduct.
- Counterfeiting and altering: Copying or altering in any manner any record, document, or identification form used or maintained by the College is not permitted.
- Dumping and littering: No student shall deposit, dump, litter or otherwise dispose of any refuse on college property except in duly designated refuse depositories.
- Gambling: Gambling is not allowed except where permitted by state law or within a sanctioned program or class.
- Illegal use of drugs: Being under the influence of, use of, possession of, or distributing illegal drugs is not permitted.
- Smoking: All Ivy Tech State College buildings are classified as "non-smoking" facilities. Smoking is permitted only in designated areas.
- Theft of property: Theft of personal property, College property, or property located on College property is a violation of College rules.
- Vandalism: The destruction or mutilation of Ivy Tech State College books, magazines, equipment, resources or buildings is a violation of College rules.

## REPEATED OFFENSES OF A LESS SERIOUS NATURE

Repeated offenses of a less serious nature are considered disruptive and will be handled under the College's disciplinary process.

## POLICY AND COMPLAINT PROCEDURE

### AGAINST HARASSMENT

The College will not tolerate harassment based on sex (with or without sexual conduct), race, color, religion, national origin, age, disability, and/or opposition to prohibited discrimination or participation in this or any other complaint procedure. This prohibition covers harassment against any student at an Ivy Tech State College campus by anyone, including other students, employees or non-employees during any College activity or program. The policy prohibiting harassment includes adverse treatment of students because they report harassment or provide information related to such complaints.

Sexual harassment is simply one form of harassment covered by this policy. Sexual harassment encompasses unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature where:

Submission to the conduct is an explicit or implicit term of student status (which includes academic and non-academic decisions).

Submission or rejection of the conduct is the basis for any decision affecting that individual's student status; or such conduct has the purpose or effect of unreasonably interfering with an individual's academic performance or creates an intimidating, hostile or offensive academic environment.

Sexual harassment would include, but not be limited to, actions such as: (1) sex-oriented oral or written "kidding" or abuse, (2) photographs, drawings or graffiti of a sexual nature, (3) subtle pressure for sexual activity, (4) physical conduct such as patting, pinching, or constant brushing against another's body, and (5) explicit demands for sexual favors, whether or not accompanied by implied or overt promises of preferential treatment or threats concerning an individual's student status.

## REPORTING AND COMPLAINT PROCEDURE

Students are encouraged to report harassment before it becomes severe or pervasive. A student who thinks that he or she has been a victim of harassment and who desires to file a complaint to that effect should report a complaint as follows:

If the complaint is regarding harassment by another student it may be filed with or reported to the Dean of Student Affairs or an academic chairperson with the expectation that the harassing behavior will be a violation of the College's Code of Student Conduct, either on its own terms or as a violation of another College policy.

If the complaint is regarding harassment by a College employee or non-employee it may be filed with or reported to the Dean of Student Affairs, any of the employee's supervisors, or with the Director of Human Resources or anyone else in a managerial role. All supervisors and members of management to whom a complaint of harassment is brought or who independently observe behavior prohibited by the harassment policy are to report the complaint of harassment or information about harassment promptly to the highest ranking official at the respective facility who is not the alleged harasser, to the Dean of Student Affairs or to the Director of Human Resources.

## INVESTIGATION

Students filing complaints of harassment are assured that information about the allegation of harassment will be shared only with those who need to know about it. Records relating to harassment complaints will be kept confidential on the same basis. Complete confidentiality cannot be guaranteed since conducting an effective investigation would not be possible without revealing certain information to the alleged harasser and potential witnesses. Under no circumstances will the individual who conducts the investigation or who has any direct or indirect control over the investigation be subject to the supervisory authority of the alleged harasser.

## DETERMINATION

After all of the evidence is in, interviews are final, and any credibility issues are resolved, a determination as to whether harassment occurred will be made and the parties informed of the determination. If no determination can be made because the evidence is inconclusive the parties will be informed of this result.

## CORRECTIVE ACTION

After the determination is made the College will undertake prompt and appropriate corrective action including discipline up to and including termination of employment of an employee harasser or dismissal of a student harasser, whenever it determines that harassment has occurred in violation of this policy. Such corrective action will be reported to the student making the complaint.

## VIOLATIONS

The College strives to provide an educational and professional environment that allows individuals to engage in their daily activities in a safe, healthy and secure manner. Local, state or federal law enforcement officials will be notified of anyone violating local, state or federal laws. Violators shall be subject to prosecution by the appropriate law enforcement officials.

Anyone found in violation of College regulations shall be subject to disciplinary action by the College through due process procedures for student conduct violations.

The regulations and procedures will be placed for reading and review in the library. Copies will also be available through the Office of Admissions or Student Affairs.

## DISCIPLINARY ACTION

Cases of student misconduct and/or lack of academic integrity are to be referred to the chief academic officer or chief student affairs officer. A student who violates the rules and regulations of the College may be subject to disciplinary actions, which may include, but not be limited to, the following:

1. Verbal reprimand;
2. Restitution for damages;
3. Restriction of privileges;
4. Failure of the assignment or course;
5. Withdrawal from a course, program or the College for the remainder of the semester or term;
6. Suspension from the College (one calendar year);
7. Dismissal from the College (five years; student may appeal for reinstatement).

In addition, the College representative will be responsible to review all initial disciplinary procedures and may suspend a student for a period of time until the Student Status Committee can meet.

Students are provided an opportunity to appeal any disciplinary decision and are required to sign a waiver if they choose to waive the right to appeal. The basic process in discipline cases is as follows: notice of charges, notice of possible penalty, and opportunity to explain a defense to some authority.

1. An appropriate College official shall notify the student that he or she is accused of violating a regulation.
2. The student shall be notified in writing that he or she may elect one of three courses of action:
  - A. The student may admit the alleged violation and agree with the recommended disciplinary action. A signed waiver which waives the right to appeal is required;

B. The student may admit the alleged violation and request a hearing before the Student Status Committee.

C. The student may deny the alleged violation, in which case the administrative officer shall refer him/her to the Student Status Committee.

The Student Status Committee hears all appeals relating to disciplinary actions.

## STUDENT GRIEVANCE POLICY

The student grievance process provides the College an appropriate mechanism to deal with violations of student rules of conduct and conversely allows a student with a disagreement to grieve against a College employee's decision affecting that student. The College encourages students to resolve their complaints informally. The informal grievance procedures are designed to accomplish a quick resolution that is most expeditious and effective.

Whenever the informal process does not result in a satisfactory resolution the College formal grievance procedure is also available.

## INFORMAL GRIEVANCE PROCEDURE

The student shall initiate the informal process with the student working one-on-one with appropriate faculty or staff and must be started within 30 calendar days of the incident. Students must bring to the attention of their instructor (in cases involving academic coursework) or relevant supervisory staff member legitimate complaints perceived by them. The student should first bring the complaint to the attention of his/her instructor or the person with whom the student has a complaint. A conference with the student will be scheduled as soon as possible and within five working days (Monday - Friday) of notice of the student complaint, at the latest. The intent of these conferences is to ensure an early discussion of the issue, that the issue has been raised in a timely fashion and that if possible a mutually acceptable resolution can be reached.

A student who feels that the conference would be futile because of that person's involvement or the situation/concern cannot be resolved with the instructor or staff with whom the student has the complaint, he or she should bring the grievance in writing to the supervisor of that area or department. The conference will be held as soon as possible and at least within five working days of notice of the complaint. Such conferences are to be conducted in proper sequence of supervisors. If the grievance is not resolved with an instructor the student may elect to request a conference with a department head, division chair or the chief academic officer, as deemed appropriate. Non-instructional areas follow the same step process. Through Student Affairs, for example, the process would be advisors/counselors, then manager, and finally the chief student affairs officer. Grievances may cover matters such as the application of College policies and practices to the grievant but the existence or content of the policies may not be grieved.

## FORMAL GRIEVANCE PROCEDURE

If a student is not satisfied with the results of the informal process the student may proceed with the formal grievance as described below.

## FORMAT OF THE WRITTEN GRIEVANCE

If the complaint is not resolved to the student's satisfaction through the informal procedure the student shall reduce the grievance to writing. The formal complaint must:

1. Clearly state the facts giving rise to the grievance.
2. Describe the efforts to informally resolve the complaint.
3. State the remedy sought by the grievant.
4. Be signed and dated.

## TIMELY FILING OF A FORMAL GRIEVANCE

Students must file complaints within a reasonable period of time, not to exceed 30 calendar days, after the informal grievance process has been exhausted. Students must file a grievance within 30 days of the end of the term in which the incident occurred

## FILING THE FORMAL GRIEVANCE

Original copies of the formal written grievance document shall be filed with both the regional office of Student Affairs and the College's Executive Director for Student Support Systems (One West 26th Street, Indianapolis, Indiana 46208). The Executive Director shall assign a College Grievance Coordinator who shall coordinate the handling of the grievance within the region.

## MEDIATION

Reasonable efforts should be made by the Grievance Coordinator to mediate a mutually agreeable resolution of the matter with the parties. A signed document should be generated by the Grievance Coordinator stating the results of the mediation.

## STUDENT STATUS COMMITTEE

The Student Status Committee is a committee whose purpose is to review all formal grievances referred to it and recommend a resolution to the chief administrative officer. It will be composed of six members, including two full-time instructional staff members and two administrative staff persons appointed by the chief administrative officer of the region. The additional two members will be students designated by the Student Government Association or the chief student affairs officer. The Committee's review of a formal appeal will begin no later than 30 days after fact-finding and mediation terminates. The Grievance Coordinator shall keep the grievance body informed of efforts related to fact-finding and mediation. Central Office support, as needed, will be available to the Grievance Coordinator.

## DISPOSITION OF A FORMAL GRIEVANCE BY THE STUDENT STATUS COMMITTEE

If mediation does not resolve the grievance the Student Status Committee shall, in all cases, conduct a hearing. Unless there is a mutual resolution of the grievance the grievance shall not be dismissed prior to the hearing. Written notice of the procedures, actions and meetings at all stages of the formal complaint procedure, including the role of advisors to each party, will be provided to both the student (grievant) and respondent.

The Student Status Committee will ensure the student due process. The student has the following rights:

1. Reasonable advance written notification of the time and place of the hearing;
2. Notification in writing of the charges with sufficient particularity to enable the student to prepare a defense;

3. Notification in writing of the names of the witness (es) directly responsible for reporting the alleged violation or, if there are no such witness (es), written notification of how the alleged violation was reported;
4. Notice of actions and meetings at all stages of this appeal procedure;
5. An opportunity to be heard;
6. An opportunity to question witnesses at hearings;
7. An opportunity to have a representative present when presenting facts, being questioned, or asking questions;
8. An expeditious hearing of the case;
9. An explanation of the decision rendered in the case.

The student shall not be required to testify against him or herself.

Once the formal grievance has been initiated and attempts by the Grievance Coordinator to mediate a settlement have been exhausted a hearing shall be held pursuant to the hearing guidelines entitled "Student Grievance Hearing Procedural Guidelines." These guidelines, which are occasionally updated, describe how the actual hearing will be conducted. The Grievance Coordinator will provide a copy to both the student (grievant) and respondent at the beginning of the formal process. Persons who desire to view the guidelines should contact the chief student affairs officer for a copy.

The Student Status Committee will issue a recommendation(s) to the chief administrative officer following its deliberation. Recommendations of the Student Status Committee if approved by the chief administrative officer are final, unless appealed to the Office of the President (see Appeal to the Office of the President). The student will be informed in writing of the chief administrative officer's decision. A copy of the letter with the chief administrative officer's decision will be filed in the student's permanent record.

## APPEAL TO THE OFFICE OF THE PRESIDENT

If the student does not accept the decision of the Student Status Committee the student may appeal, in writing, within 30 calendar days from the written notification by sending a written notice to the General Counsel, Collegewide Appeals Grievance Body, at P.O. Box 1763, Indianapolis, IN 46206.

An appeal of the decision of the Student Status Committee to the Collegewide Appeals Grievance Body is limited to procedural errors. The Collegewide Appeals Grievance Body does not review or re-hear the merits of the original grievance. The Collegewide Appeals Grievance Body can recommend to the President that the decision should stand or to remand it back to the campus chief administrative officer for reconsideration. The decision of the President is final.

## REINSTATEMENT TO THE COLLEGE

If a student is dismissed from any campus/region of Ivy Tech State College, that individual is dismissed from the College. The year starts at the time/date of official notification to the student by the Chief Administrative Officer. After one calendar year the individual under suspension may apply for reinstatement. If the student is dismissed the student may appeal for reinstatement after five years. The individual must begin the reinstatement appeal process by informing the chief student affairs officer at the campus where the dismissal took place of his/her intentions. The appeal for reinstatement may be applied for at any campus/region of Ivy Tech where the individual hopes to attend. The campus/region Student Status Committee will act on the appeal within 30 days of its receipt. The recommendation of the Student Status Committee will be forwarded to the chief administrative officer of the campus/region. That individual will render a judgement on the appeal. That judgement will be final.

## STUDENT APPEAL OF A GRADE

When a student believes the final grade he or she received in a course is inaccurate, he or she should make an appointment with the instructor who issued the grade or status and explain the reasons for this belief. This process must be initiated within 30 calendar days of receiving the grade. The instructor and the student should make every effort to resolve the issue. It is expected that most if not all misunderstandings will be resolved at this level.

If the grade or status issue is not resolved the student can appeal in writing to the instructor's supervisor. This individual may be the department chairperson or program chairperson. Once the student has appealed the grade or status with the chairperson, if the issue is not resolved to the student's satisfaction the student may appeal to the department chairperson, next higher chairperson, or whomever is next in line.

The student's next recourse is to appeal to the chief academic officer. If the student feels further appeal is necessary he or she may file a formal grievance to the Student Status Committee following the procedures as outlined above.

## STUDENT RIGHT TO KNOW

The 1990 federal Student Right to Know Act requires colleges and universities to report to prospective and current students the persistence and graduation rates of full-time technical certificate and degree-seeking students. The graduation rate is based upon program completion within 150 percent of time usually required for a full-time student. For technical certificate students, this is the number of full-time students graduating in three semesters. For associate degree students, this is the number of students graduating in six semesters. Contact the Office of Student Affairs for further information.

# **CAMPUS SECURITY INFORMATION**

## TO REPORT A CRIME

Ivy Tech is required by federal law to report the frequency of criminal activity occurring on its campuses to current and prospective students, faculty, staff and parents upon request. Any student, prospective student, faculty or staff person who has been a victim of or a witness to a criminal activity which occurred on any of the facilities or grounds of any Ivy Tech campus is encouraged to report this act to campus security or to the Office of Student Affairs.

## HOURS OF OPERATION

The normal hours of operation are posted at each Ivy Tech campus.

## SECURITY

Each Ivy Tech campus designates employees who are responsible for addressing security-related matters and to whom criminal activity should be reported. If security staff members are not available the activity should be reported to the Office of Student Affairs. The local police department also should be notified of any crime. It is College policy to assist the police in any investigation.

## PROMPT AND ACCURATE REPORTING

All criminal activity should be reported accurately to Ivy Tech personnel and local police. Misrepresenting criminal activity or falsely reporting an incident could result in prosecution or College disciplinary action.

## RESPONSIBILITY

Ivy Tech campuses have low occurrences of criminal activity. However, safety precautions should be observed at all times. The College encourages all students, prospective students, faculty and staff to take the responsibility to help each other in situations where criminal activity occurs.

## CRIME PREVENTION PROGRAM

Ivy Tech is not a residential college. Students are encouraged to follow the same safety and precautionary measures they follow in their homes and in the community. The Office of Student Affairs will assist anyone interested in attending a seminar or program on crime prevention.

## OFF-CAMPUS HOUSING

There is no off-campus housing endorsed by Ivy Tech.

## ALCOHOL VIOLATION

Under Indiana law, consuming, being under the influence of, or possessing intoxicating beverages on College property is not permitted. Students, staff or visitors in violation of this law face College disciplinary action.

## DRUG VIOLATION

Under Indiana law, being under the influence of, use of, possession of, or distribution of illegal drugs are not permitted. Local law enforcement authorities will be notified when instances occur.

## SUBSTANCE ABUSE COUNSELING

The College refers students in need of special help with substance abuse problems to appropriate counseling agencies in the community.

## INCIDENT REPORTS

A copy of each incident report is forwarded to the staff member designated to handle campus security-related issues. The Dean of Student Affairs also is supplied with a copy.

## ANNUAL REPORT

A copy of the annual report is available from the Office of Student Affairs.

# INSTRUCTIONAL PROGRAMS

In keeping with its mission and goals, the College serves persons with educational programs consistent with projected job and educational requirements and personal interests. Ivy Tech programs complement secondary programs, four-year programs and adult basic education programs. The purposes of Ivy Tech's programs are to develop competent workers for initial employment, upgrade the skills of those already employed and provide a foundation for further education at a baccalaureate institution.

Ivy Tech programs are designed to meet the needs of students, accommodating those who wish to enroll in a few classes or a full degree program. A few classes in a planned sequence may comprise a career development certificate. Credit programs culminate in an associate of applied science degree, an associate of science degree, or a technical certificate.

The College's degree programs are offered in six divisions:

- Business Division
- Health Sciences Division
- Public Services Division
- Technology Division
- Visual Technologies Division
- General Education and Support Services Division

## ASSOCIATE OF APPLIED SCIENCE (AAS) DEGREE PROGRAMS

Associate of applied science degree programs prepare students for careers, career changes and career advancement. AAS programs may also prepare students for transfer to four-year institutions. These programs offer education in recognized technical areas and specialties with emphasis on analysis, synthesis and evaluation. The program content, which is approximately 30 percent general education, provides depth and breadth in conceptual and technical skills. The general education courses equip students with the problem-solving, communications, scientific and mathematical skills to compete successfully in the job market. Technical courses equip students with the technical skills to obtain employment and to advance in the workforce.

## ASSOCIATE OF SCIENCE (AS) DEGREE PROGRAMS

Associate of science degree programs prepare students for transfer to cooperating four-year institutions and for careers. AS programs contain 40 percent or more general education with the balance in technical courses. The general education and technical courses provide students with a foundation for transfer to a four-year institution and eventual completion of a baccalaureate degree, and equip students with skills for the job market. AS curricula can be tailored to meet students' specific transfer objectives. Students should contact their local Ivy Tech campus for information about AS transfer programs.

## TECHNICAL CERTIFICATE (TC) PROGRAMS

Technical Certificate programs provide education in conceptual and technical skills for specific occupations. Each program contains a sequence of required courses in a recognized specialty within one of the programs at the College. The program content is designed to develop competency in the comprehension of general and technical skills.

## CAREER DEVELOPMENT CERTIFICATES (CDC)

Ivy Tech provides short-term programs for individuals who desire to develop competencies in a specific area. These programs are less than 30 semester credits in length. Instruction is delivered through methods that include regular courses and specifically designed courses. Many of these courses are based on a sequence of learning experiences determined by a certifying

state or national association or organization. Completion of certain short-term programs qualifies students to sit for certification examinations. The number and type of short-term programs vary among the Ivy Tech campuses.

## BUSINESS AND INDUSTRY TRAINING PROGRAMS

Ivy Tech offers specialized training services for business and industry. Directors of business and industry training develop custom-designed programs and services to meet the training needs of local businesses. Through its training offices Ivy Tech consults, designs, produces, conducts and evaluates training specifically designed to satisfy employer needs on a one-time or on-going basis. The directors work with business and industry, trade unions and community economic development groups to assess training needs and to deliver training when and where it is needed, often in-plant.

The services provided by the business and industry training programs help ensure that the skills of employees of Indiana firms are current with changing technology. Instruction that best meets a company's specific needs is delivered through methods that might include regular courses, short-term courses, seminars, conferences and labs.

With more than 30 years of experience in technical instruction Ivy Tech has been and continues to be a leader in promoting Indiana's economic development by providing comprehensive training services to Indiana businesses and industries. Detailed information is available from the directors of business and industry training at Ivy Tech campuses.

## INDIANA PARTNERSHIP FOR STATEWIDE EDUCATION (IPSE)

The Indiana Partnership for Statewide Education is a collaboration of Indiana's colleges and universities committed to delivering higher education courses via distance education to all learners throughout the state. Some IPSE courses are offered via the Indiana Higher Education Telecommunications System (IHETS). Classes are delivered via satellite from college and university campuses to learning centers located throughout Indiana, many on Ivy Tech campuses. Other courses are delivered directly into student homes via cable television, public broadcasting, video tapes or computers. Most courses offered through the partnership are transferable among all seven of Indiana's public colleges and universities as well as several private colleges and universities. Contact the campus for availability of courses.

## STATEWIDE PROGRAM INITIATIVES

### **General Technical Studies Program**

The General Technical Studies Program provides an option for students who may not be ready to enter a degree program. As such the program serves primarily as a beginning point for students as they define and meet their educational objectives. It is designed to meet the diverse needs of the students Ivy Tech serves. The program will:

- Provide an opportunity for students to correct skill deficiencies before enrolling in a technical degree program.
- Provide a program for students who have not selected a specific educational or career goal by the time they have entered the College.
- Allow students who are waiting for admission into a selective program to enter the College.
- Provide a directed program of career-oriented educational exploration to encourage an examination of occupational program areas.
- Increase student retention by providing a vehicle which promotes informed choices.
- Provide undecided students the opportunity to pursue coursework which will serve as a foundation for related one- or two-year programs while engaged in career exploration.

- Provide an opportunity for a student to pursue a one-year program of general technical studies.

The General Technical Studies Program is offered through the General Education and Support Services Division. Interested students should contact their local campus to see a description of the degree requirements.

## **Apprenticeship Programs**

In 1993, Ivy Tech's State Board of Trustees, the Indiana Commission for Vocational and Technical Education, and the Commission for Higher Education approved joint educational programs between the College and local joint apprenticeship committees in the building trades.

Individuals who participate in the program become Ivy Tech students and have the opportunity to earn credit while moving through the program. The apprentice has the opportunity to earn a technical certificate or associate of applied science degree. The degree depends upon the local Joint Apprenticeship Training Committee agreement with the College. Credit is given for on-the-job work experience in accordance with guidelines commonly accepted by institutions of higher education. Distribution of apprenticeship degree programs varies by site.

Ivy Tech also provides a number of industrial apprenticeship curricula, some of which can culminate in the awarding of a certificate or degree. Contact the Apprenticeship Enrollment Manager for further information.

Contact the local Ivy Tech campus for information about the availability of apprenticeship programs in the building and industrial trades.

## **Senior Scholars**

In the spring of 2001, Ivy Tech State College launched the Senior Scholars program. Indiana citizens 60 years of age and older can take credit courses at Ivy Tech tuition-free. Students are responsible for books and any associated fees. In order to qualify for this program a person must meet the following requirements:

- Be an Indiana resident;
- Be 60 years of age or older at the start of a semester;
- Possess a high school diploma or GED;
- Be retired from their primary vocation (does not apply to homemakers); and
- Not be employed on a full-time basis.

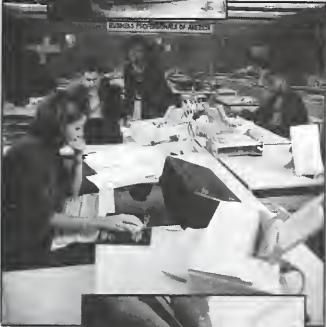
Non-credit courses are not included in the Senior Scholars program. Please contact the Office of Admissions for further information.

## **Workforce Certification**

Several of the College's campuses provide Centers for Workforce Certification. The centers focus on certification activity in information technology, e.g., Novell, Microsoft and Cisco. They also provide certification training and testing in a wide variety of other discipline areas in health, business, public services and technology. The centers provide pre-assessment services, classroom and hands-on training, post-assessment and certification testing services in a one-stop setting. Courses are offered both in semester length and short-term sessions and in credit and not-for-credit formats. Certification testing is offered to validate the competencies achieved in training courses. Many certifications can be equated to college credit courses through an evaluation process conducted by the local faculty.



# Business



The Business Division provides career and transfer education for individuals seeking employment or further education and for those who are currently employed in business and business-related fields. Programs lead to an associate of applied science degree, an associate of science degree or a technical certificate. Opportunities to transfer credits to four-year colleges are available through associate of science degrees or through transfer of credit for selected individual courses. The Business Division also offers courses to students who are not seeking a degree, but desire specialized post-secondary education.

The programs in the Business Division — Accounting, Office Administration, Business Administration and Computer Information Systems — are accredited on a statewide basis by the Association of Collegiate Business Schools and Programs (ACBSP). ACBSP accredits two- and four-year institutions offering programs in business which adhere to standards approved by its member institutions. Standards are determined with regard to a program's quality, rigor, transfer, faculty credentialing and other pertinent criteria.

Career opportunities in business and office environments are expanding rapidly for those who have the technical skills to meet the demands. Programs offered through the Business Division provide education that meets the needs of Indiana employers.



# Accounting

## Program Description

The Accounting program develops an understanding of accounting principles, business law, communications, business equipment and related areas of study in the field. Instruction is offered in computerized accounting systems. Technical skills in financial accounting, cost accounting and tax preparation are emphasized.

Accounting duties typically include maintaining journals and ledgers, processing banking transactions, billing, preparing payroll, maintaining inventory records, purchasing, processing expense reports, preparing financial statements and analyzing managerial reports. Position titles may include junior or staff accountant, junior auditor, cost accounting clerk, bookkeeper, payroll clerk, inventory clerk, accounts receivable clerk and financial management trainee.

A two-year program requiring 60 credits leads to an associate of applied science degree. Technical certificates and career development certificates also are available. An associate of science degree is available at selected campuses. The accounting program is available via distance education for interested students. Contact the nearest Ivy Tech campus for information and to enroll. The availability of degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Accounting program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- *Associate of Applied Science (60 Credits)*
- *Technical Certificate (30 Credits)*

### Specialties Offered:

*None*

### Program Available at:

*Anderson  
Bloomington  
Columbus  
East Chicago  
Elkhart  
Evansville  
Fort Wayne  
Gary  
Indianapolis  
Kokomo  
Lafayette  
Lawrenceburg  
Logansport  
Madison  
Marion  
Muncie  
Richmond  
Sellersburg  
South Bend  
Terre Haute  
Valparaiso  
Warsaw*

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Accounting

## Associate of Applied Science

To earn this degree,  
you must have 60  
credits in the  
following areas:

General Education Core	18
Technical Core	18
Other Required Courses	12
Locally Determined Courses	12

### You Must Have

#### GENERAL EDUCATION

	Required Courses	Credit Hours
COM 101	Fundamentals of Public Speaking	3
*ECN XXX	Economics Elective	3
ENG 111	English Composition	3
**MAT 111	Intermediate Algebra	3
	OR	
**MAT 112	Functional Mathematics	3
*	Life/Physical Sciences Elective	3
*	Humanities/Social Sciences Elective	3

#### TECHNICAL

ACC 101	Principles of Accounting I	3
ACC 102	Principles of Accounting II	3
BUS 101	Introduction to Business	3
BUS 102	Business Law	3
CIS 101	Introduction to Microcomputers	3
OAD 218	Spreadsheets	3

#### OTHER REQUIRED COURSES (24 CREDITS)

ACC 105	Income Tax I	3
ACC 201	Intermediate Accounting I	3
ACC 203	Cost Accounting I	3
^ACC 225	Integrated Accounting Software	3
	Locally Determined Courses	12

#### Key (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Accounting

## Technical Certificate

To earn this degree,  
you must have 30  
credits in the  
following areas:

General Education Core	6
Technical Core	3
Specialty Core	6
Locally Determined Courses	15

You Must Have	Required Courses	Credit Hours
GENERAL EDUCATION	**COM 101      Fundamentals of Public Speaking OR **ENG 111      English Composition *                    Humanities/Social Sciences Elective	3 3 3
TECHNICAL	CIS 101      Introduction to Microcomputers	3
OTHER REQUIRED COURSES (21 CREDITS)	ACC 101      Principles of Accounting I ACC 102      Principles of Accounting II Locally Determined Courses	3 3 15

**Key** (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capstone Course

# Business Administration

## Program Description

The Business Administration program gives students the broad background they need for general administrative positions in a variety of business environments. It also provides an opportunity for specialization in one of the following areas: casino management, eBusiness, financial services, health care management, human resources management, logistics management, management, marketing, operations management, quality management, real estate and restaurant management.

A two-year program requiring 60-66 credits leads to an associate of applied science degree. Business Administration students wishing to pursue a bachelor's of science in Business Administration, or other business baccalaureate programs, at Indiana State University, Ball State University or the University of Southern Indiana, and enter as a junior-year student, may complete an associate of science degree program in Business Administration. Students should choose the appropriate associate of science curriculum for the university they plan to attend. Students completing the associate of science program will also be able to enter the workforce, as well as to transfer to ISU, Ball State or USI. Technical certificates and career development certificates are available. The Business Administration program is available via distance education for interested students. Contact the nearest Ivy Tech campus for information and to enroll. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Business Administration program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- Associate of Applied Science (60-66 Credits)
- Associate of Science (66 Credits, BSU; 63 Credits, ISU; 64 Credits, USI)
- Technical Certificate (30 Credits)

### Specialties Offered:

- Casino Management
- eBusiness
- Financial Services
- Health Care Mgmt.
- Human Resources Mgmt.
- Logistics Management
- Management
- Marketing
- Operations Management
- Quality Management
- Real Estate
- Restaurant Management

### Program

### Available at:

Anderson  
Bloomington  
Columbus  
Elkhart  
Evansville  
Fort Wayne  
Gary  
Indianapolis  
Kokomo  
Lafayette  
Lawrenceburg  
Madison  
Marion  
Michigan City  
Muncie  
Richmond  
Sellersburg  
South Bend  
Terre Haute  
Valparaiso  
Warsaw

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Business Administration

## Associate of Applied Science

To earn this degree,  
you must have  
60-66 credits in the  
following areas:

General Education Core	18
Technical Core	18
Specialty Core	12-19
Locally Determined Courses	11-13

### You Must Have

### Required Courses

**Credit  
Hours**

GENERAL EDUCATION	COM 101 *ECN ENG 111 **MAT 111	Fundamentals of Public Speaking Economics Elective English Composition Intermediate Algebra OR **MAT 112 * *	3 3 3 3 3 3 3 3
TECHNICAL	ACC 101 BUS 101 BUS 102 BUS 105 CIS 101 MKT 101	Principles of Accounting I Introduction to Business Business Law Principles of Management Introduction to Microcomputers Principles of Marketing	3 3 3 3 3 3
Choose One of the Following Specialties	^BUS 204 HOS 132 HOS 141 HOS 231	Case Problems in Business Techniques of Casino Games: Blackjack Introduction to Casino Operations Techniques of Casino Games: Craps-Subsequent Locally Determined Courses	3 6 3 7 11
eBUSINESS SPECIALTY (24 CREDITS)	^BUS 204 BUS 209 CIS 252 MKT 240	Case Problems in Business Introduction to eBusiness Web Site Development Internet Marketing Locally Determined Courses	3 3 3 3 12
FINANCIAL SERVICES SPECIALTY (24 CREDITS)	BNK 215 BNK 218 ^BUS 204 MKT 205	Principles of Banking Consumer Lending Case Problems in Business Principles of Insurance Locally Determined Courses	3 3 3 3 12

**Specialties Continued Next Page**

# Business Administration

## Associate of Applied Science—Specialties

	Required Courses	Credit Hours
HEALTH CARE MANAGEMENT SPECIALTY (24 CREDITS)	BUS 202 ^BUS 204 HLT 125 HLT 226  Human Resource Management Case Problems in Business Health Care Systems and Trends Organizational Development in Health Care Locally Determined Courses	3 3 3 3 12
HUMAN RESOURCES MANAGEMENT SPECIALTY (24 CREDITS)	BUS 202 ^BUS 204 BUS 220 BUS 222 BUS 223  Human Resource Management Case Problems in Business Conference Leadership Training Benefits Administration Occupational Safety and Health Locally Determined Courses	3 3 3 3 3 9
LOGISTICS MANAGEMENT SPECIALTY (24 CREDITS)	^BUS 204 LOG 201 LOG 202 MKT 202  Case Problems in Business Transportation Systems Physical Distribution Logistics/Purchasing Control Locally Determined Courses	3 3 3 3 12
MANAGEMENT SPECIALTY (24 CREDITS)	BUS 202 BUS 203 ^BUS 204 BUS 210  Human Resource Management Business Development Case Problems in Business Managerial Finance Locally Determined Courses	3 3 3 3 12
MARKETING SPECIALTY (24 CREDITS)	^BUS 204 MKT 104 MKT 201 MKT 220  Case Problems in Business Promotions Management Introduction to Market Research Principles of Retailing Locally Determined Courses	3 3 3 3 12
OPERATIONS MANAGEMENT SPECIALTY (24 CREDITS)	^BUS 204 OPM 102 OPM 224 QSC 204  Case Problems in Business Techniques of Supervision I Operations Management Total Quality Management Locally Determined Courses	3 3 3 3 12
QUALITY MANAGEMENT SPECIALTY (24 CREDITS)	^BUS 204 QSC 101 QSC 102 QSC 202  Case Problems in Business Quality Control Concepts and Techniques I Statistical Process Control Quality Control Concepts and Techniques II Locally Determined Courses	3 3 3 3 12

**Specialties Continued Next Page**

# Business Administration

## Associate of Applied Science—Specialties

REAL ESTATE SPECIALTY (24 CREDITS)	ADPU 109 ADPU 110 ADPU 114 ^BUS 204	Real Estate Sales Real Estate Brokers Real Estate Appraising Case Problems in Business Locally Determined Courses	3 3 6 3 9
RESTAURANT MANAGEMENT SPECIALTY (25 CREDITS)	^BUS 204 HOS 101 HOS 108 HRM 204	Case Problems in Business Sanitation and First Aid Table Service Food and Beverage Management Locally Determined Courses	3 3 3 3 13

## Associate of Science

To earn this degree,  
you must have  
63 credits in the  
following areas:

General Education Core	36
Technical Core	27
Specialty Core	N/A
Locally Determined Courses	N/A



Curriculum designed for transfer  
to Indiana State University's BS  
in Business Administration  
program

### You Must Have

### Required Courses

### Credit Hours

GENERAL EDUCATION	COM 101 ENG 111 ENG 112 ENG 211 MAT 111 MAT 112 * * * * *	Fundamentals of Public Speaking English Composition Exposition and Persuasion OR Technical Writing Intermediate Algebra OR Functional Mathematics Life/Physical Sciences Elective Life/Physical Sciences, Math Elective Humanities Electives Social Sciences Electives	3 3 3 3 3 3 3 3 3 3 3 9 9
TECHNICAL	ACC 101 ACC 102 BUS 101 BUS 102 BUS 110 CIS 101 CIS 102 ECN 201 ECN 202	Principles of Accounting I Principles of Accounting II Introduction to Business Business Law Business Statistics Introduction to Microcomputers Information Systems Fundamentals Principles of Macroeconomics Principles of Microeconomics	3 3 3 3 3 3 3 3 3

# Business Administration

## Associate of Science

To earn this degree, you must have 66 credits in the following areas:

General Education Core	36
Technical Core	30
Specialty Core	N/A
Locally Determined Courses	N/A



Curriculum designed for transfer to Ball State University's College of Business, Business Administration program.

### You Must Have

#### GENERAL EDUCATION

COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion	3
BIO 101	Introductory Biology	3
PSY 101	Introduction to Psychology	3
SOC 111	Introduction to Sociology	3
PHL 101	Introduction to Philosophy	3
POL 101	Introduction to American Government and Politics	3
HSY 101	Survey of American History I	3
HSY 102	Survey of American History II	3
MAT 111	Intermediate Algebra	3
MAT 135	Finite Math	3

#### TECHNICAL

ACC 101	Principles of Accounting I	3
ACC 102	Principles of Accounting II	3
BUS 101	Introduction to Business	3
BUS 102	Business Law	3
BUS 110	Business Statistics	3
CIS 101	Introduction to Microcomputers	3
CIS 102	Information Systems Fundamentals	3
ECN 201	Principles of Macroeconomics	3
ECN 202	Principles of Microeconomics	3
MAT 201	Brief Calculus	3

**Key** (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capstone Course

# Business Administration

## Associate of Science

To earn this degree,  
you must have  
64 credits in the  
following areas:

General Education Core	34
Technical Core	30
Specialty Core	N/A
Locally Determined Courses	N/A



Curriculum designed for  
transfer to the University of  
Southern Indiana's B.S. in  
Business Administration  
program.

### You Must Have

#### GENERAL EDUCATION

COM 101	Fundamentals of Public Speaking	3
COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion	3
HSY 101	Survey of American History I	3
MAT 133	College Algebra	4
PHL 102	Introduction to Ethics	3
POL 101	Introduction to American Government and Politics	3
PSY 101	Introduction to Psychology	3
SCI 111	Physical Science	3
SOC 111	Introduction to Sociology	3

### Required Courses

**Credit  
Hours**

#### TECHNICAL

ACC 101	Principles of Accounting I	3
ACC 102	Principles of Accounting II	3
BUS 101	Introduction to Business	3
BUS 102	Business Law	3
BUS 110	Business Statistics	3
CIS 101	Introduction to Microcomputers	3
ECN 201	Principles of Macroeconomics	3
ECN 202	Principles of Microeconomics	3
OAD 207	Integrated Applications	3
OAD 216	Business Communications	3

**Key** (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capstone Course

# Business Administration

## Technical Certificate

To earn this degree,  
you must have  
30-33 credits in the  
following areas:

General Education Core	6
Technical Core	3
Specialty Core	6-24
Locally Determined Courses	0-18

### You Must Have

#### GENERAL EDUCATION

	Required Courses	Credit Hours
**ENG 111	English Composition OR	3
**COM 101	Fundamentals of Public Speaking	3
** MAT 111	Intermediate Algebra OR	3
** MAT 112	Functional Mathematics	3
BUS 101	Introduction to Business	3

#### TECHNICAL

### Choose One Specialty

#### CASINO MANAGEMENT SPECIALTY (24 CREDITS)

HOS 131	Techniques of Casino Games: Craps	9
HOS 132	Techniques of Casino Games: Blackjack	6
HOS 141	Introduction to Casino Operations	3
	Locally Determined Courses	6

#### FINANCIAL SERVICES SPECIALTY (21 CREDITS)

ACC 101	Principles of Accounting I	3
BNK 215	Principles of Banking	3
BNK 218	Consumer Lending	3
	Locally Determined Courses	12

#### HEALTH CARE MANAGEMENT SPECIALTY (24 CREDITS)

BUS 202	Human Resources Management	3
HLT 125	Health Care Systems and Trends	3
	Locally Determined Courses	18

#### HUMAN RESOURCES MANAGEMENT SPECIALTY (24 CREDITS)

BUS 102	Business Law	3
BUS 105	Principles of Management	3
BUS 202	Human Resource Management	3
BUS 220	Conference Leadership Training	3
BUS 221	Principles of Employment	3
BUS 222	Benefits Administration	3
BUS 223	Occupational Safety and Health	3
CIS 101	Introduction to Microcomputers	3

#### MANAGEMENT SPECIALTY (21 CREDITS)

CIS 101	Introduction to Microcomputers	3
BUS 105	Principles of Management	3
	Locally Determined Courses	15

#### MARKETING SPECIALTY (21 CREDITS)

CIS 101	Introduction to Microcomputers	3
MKT 101	Principles of Marketing	3
	Locally Determined Courses	15

#### OPERATIONS MANAGEMENT SPECIALTY (21 CREDITS)

CIS 101	Introduction to Microcomputers	3
OPM 102	Techniques of Supervision I	3
	Locally Determined Courses	15

#### QUALITY MANAGEMENT SPECIALTY (21 CREDITS)

CIS 101	Introduction to Microcomputers	3
QSC 101	Quality Control Concepts and Techniques I	3
	Locally Determined Courses	15

# Computer Information Systems

## Degrees Available:

- Associate of Applied Science (60 Credits)
- Technical Certificate (30 Credits)

## Program Description

The Computer Information Systems curriculum, with specialties in information technology, network, PC support and administration, and programmer/analyst, is designed to provide flexible and comprehensive education. The curriculum includes technical courses in computer information systems and related areas, general education and locally determined technical courses in each specialty area. Instruction includes both theoretical concepts and practical applications needed to produce graduates able to function in positions of responsibility.

Automated systems allow for the integration of several functionally related applications such as word processing, database management, spreadsheets, programming, electronic mail systems, graphics generation and telecommunications. These systems may be stand-alone, shared logic, distributed or integrated. Demand for employees with computer and business skills is particularly high in small- and medium-sized firms which create, transmit and control information by using computer technology as a management tool.

A two-year program requiring 60 credit hours leads to an associate of applied science degree. Technical certificates and career development certificates also are available. An associate of science degree is available at selected campuses. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Computer Information Systems program participate in evaluations of proficiency in general and technical education.

## Specialties Offered:

- *Information Technology*
- *Network (Novell)*
- *Network (Windows NT)*
- *Network (Multi-Vendor)*
- *PC Support & Administration*
- *Programmer/Analyst*

## Program Available at:

Anderson  
Bloomington  
Columbus  
East Chicago  
Elkhart  
Evansville  
Fort Wayne  
Gary  
Indianapolis  
Kokomo  
Lafayette  
Lawrenceburg  
Logansport  
Madison  
Marion  
Muncie  
Richmond  
Sellersburg  
South Bend  
Terre Haute  
Valparaiso  
Warsaw

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Computer Information Systems

## Associate of Applied Science

To earn this degree,  
you must have 60  
credits in the  
following areas:

General Education Core	18
Technical Core	18
Specialty Core	12
Locally Determined Courses	12

### You Must Have

#### GENERAL EDUCATION

		<b>Required Courses</b>	<b>Credit Hours</b>
COM 101	Fundamentals of Public Speaking	3	
*ECN	Economics Elective	3	
ENG 111	English Composition	3	
**MAT 111	Intermediate Algebra	3	
	OR		
**MAT 112	Functional Mathematics	3	
*	Humanities/Social Sciences Elective	3	
*	Life/Physical Sciences Elective	3	

#### TECHNICAL

ACC 101	Principles of Accounting I	3
BUS 101	Introduction to Business	3
CIS 101	Introduction to Microcomputers	3
CIS 102	Information Systems Fundamentals	3
CIS 106	Microcomputer Operating Systems	3
^CIS 203	Systems Analysis and Design	3

### Choose One of the Following Specialties

#### INFORMATION TECHNOLOGY SPECIALTY (24 CREDITS)

CIS 114	Principles of Management Information Systems	3
CIS 201	Database Design and Management	3
CIS 206	Project Development with High Level Tools	3
CIS 227	Topics in Information Management	3
	Locally Determined Courses	12

#### NETWORK/NOVELL SPECIALTY (24 CREDITS)

CIS 202	Data Communications	3
CIS 243	Novell Network Administration I	3
CIS 244	Novell Network Administration II	3
CIS 246	Novell Network Hardware Service and Support	3
	Locally Determined Courses	12

**Specialties Continued Next Page**

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Computer Information Systems

## Associate of Applied Science—Specialties

		Required Courses	Credit Hours
NETWORK/WINDOWS NT SPECIALTY (24 CREDITS)	CIS 202 CIS 263 CIS 264 CIS 266	Data Communications Windows NT Network Administration I Windows NT Network Administration II Windows NT Network Hardware Service and Support Locally Determined Courses	3 3 3 3 12
NETWORK/MULTI-VENDOR SPECIALTY (24 CREDITS)	CIS 202 CIS 255 CIS 258 CIS 273	Data Communications Network Operating Systems Network Communication and Connectivity Network Administration Locally Determined Courses	3 3 3 3 12
PC SUPPORT AND ADMINISTRATION SPECIALTY (24 CREDITS)	CIS 202 CIS 224 CIS 251 CIS 252	Data Communications Hardware and Software Troubleshooting Advanced Operating Systems Web Site Development Locally Determined Courses	3 3 3 3 12
PROGRAMMER/ANALYST SPECIALTY (24 CREDITS)	CIS 113 CIS 120 CIS 201 CIS '217	Logic, Design, and Programming Programming I Database Design and Management Programming II Locally Determined Courses	3 3 3 3 12

# Computer Information Systems

## Technical Certificate

To earn this degree,  
you must have 30  
credits in the  
following areas:

General Education Core	6
Technical Core	3
Other Required Courses	6
Locally Determined Courses	15

You Must Have	Required Courses	Credit Hours
GENERAL EDUCATION	**COM 102      Introduction to Interpersonal Communication OR **ENG 111      English Composition **MAT 111      Intermediate Algebra OR **MAT 112      Functional Mathematics	3 3 3 3
TECHNICAL	CIS 101      Introduction to Microcomputers	3
OTHER REQUIRED COURSES (21 CREDITS)	CIS 102      Information Systems Fundamentals CIS 106      Microcomputer Operating Systems Locally Determined Courses	3 3 15

**Key** (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capstone Course

# Office Administration

## Program Description

The Office Administration program prepares students for an automated office environment. Students develop basic office skills and acquire computer skills including word processing, spreadsheets, databases, and microcomputer operating systems. Several applications (advanced word processing, desktop publishing and integrated packages) also can be studied in depth.

The Office Administration program is designed to accommodate students with different levels of training and experience. Courses are offered which provide initial, advanced and refresher education and assist individuals in achieving professional recognition and career progression. The program prepares graduates as administrative office personnel and provides opportunities for specialized training in such areas as administrative, insurance, legal, medical, and software applications. Students who complete the recommended sequence of courses are eligible to take the Administrative/Information Processing Specialist (AIPS) or the Certified Professional Secretary (CPS) exams administered by the Institute for Certification of the International Association of Administrative Professionals (IAAP).

A two-year program requiring 60 credit hours leads to an associate of applied science degree. Technical certificates and career development certificates also are available. An associate of science degree is available at selected campuses. The availability of degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Office Administration program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- *Associate of Applied Science (60 Credits)*
- *Technical Certificate (30 Credits)*

### Specialties Offered:

- *Administrative*
- *Insurance*
- *Legal*
- *Medical*
- *Software Applications*

### Program Available at:

Anderson  
Bloomington  
Columbus  
East Chicago  
Elkhart  
Evansville  
Fort Wayne  
Gary  
Indianapolis  
Kokomo  
Lafayette  
Lawrenceburg  
Logansport  
Madison  
Marion  
Muncie  
Richmond  
Sellersburg  
South Bend  
Tell City  
Terre Haute  
Valparaiso  
Warsaw

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Office Administration

## Associate of Applied Science

To earn this degree,  
you must have 60  
credits in the  
following areas:

General Education Core	18
Technical Core	18
Specialty Core	12-15
Locally Determined Courses	9-12

You Must Have	Required Courses	Credit Hours
GENERAL EDUCATION	COM 101 Fundamentals of Public Speaking *ECN Economics Elective ENG 111 English Composition **MAT 111 Intermediate Algebra OR **MAT 112 Functional Mathematics * Life/Physical Sciences Elective * Social Sciences Elective	3 3 3 3 3 3 3 3
TECHNICAL	ACC 101 Principles of Accounting 1 BUS 101 Introduction to Business CIS 101 Introduction to Microcomputers OAD 119 Document Processing OAD 216 Business Communications ^OAD 221 Office Administration and Supervision	3 3 3 3 3 3
Choose One of the Following Specialties		
ADMINISTRATIVE SPECIALTY (24 CREDITS)	OAD 103 Word Processing Applications OAD 114 Desktop Publishing OAD 121 Office Procedures OAD 220 Records and Database Management Locally Determined Courses	3 3 3 3 12
INSURANCE SPECIALTY (24 CREDITS)	INS 210 Property and Liability Insurance Principles INS 220 Personal Insurance INS 230 Commercial Insurance OAD 103 Word Processing Applications Locally Determined Courses	3 3 3 3 12

Specialties Continued Next Page

# Office Administration

## Associate of Applied Science - Specialties

	<b>Required Courses</b>	<b>Credit Hours</b>
LEGAL SPECIALTY (24 CREDITS)	OAD 103 Word Processing Applications LEG 101 Introduction to Paralegal Studies LEG 102 Legal Research and Writing LEG 103 Civil Procedures Locally Determined Courses	3 3 3 3 12
MEDICAL SPECIALTY (24 CREDITS)	HHS 101 Medical Terminology MEA 137 Insurance and Basic Coding with Computer Applications OAD 121 Office Procedures Locally Determined Courses	3 3 3 15
SOFTWARE APPLICATIONS SPECIALTY (24 CREDITS)	OAD 103 Word Processing Applications OAD 114 Desktop Publishing OAD 214 Multimedia Design OAD 217 Problem Solving for Computer Users OAD 218 Spreadsheets Locally Determined Courses	3 3 3 3 3 9

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Office Administration

## Technical Certificate

To earn this degree,  
you must have 30  
credits in the  
following areas:

General Education Core	6
Technical Core	3
Specialty Core	9
Locally Determined Courses	12

### You Must Have

### Required Courses

### Credit Hours

#### GENERAL EDUCATION

ENG 111	English Composition	3
*	Social Sciences Elective	3

#### TECHNICAL

OAD 119	Document Processing	3
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#### OTHER REQUIRED COURSES (21 CREDITS)

CIS 101	Introduction to Microcomputers	3
OAD 103	Word Processing Applications	3
OAD 121	Office Procedures	3
	Locally Determined Courses	12

#### Key (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capstone Course



# Health Sciences

The Division of Health Sciences prepares students to become technical members of the health care team. Classroom, laboratory and clinical experiences prepare students for service in hospitals, laboratories, nursing homes, physicians' offices and other service-related settings.



College health sciences programs are recognized and accredited by appropriate external accrediting agencies. Students should contact the local Ivy Tech campus for information concerning programs and course offerings.

# A.S. in Nursing

## Program Description

The Associate of Science in Nursing (ASN) Program is designed to accommodate two groups of students: those who are entering a nursing program for the first time and those licensed practical nurses seeking educational mobility to the associate-degree level. For first-time nursing students, the curriculum listed on the next page is completed. LPN's admitted to the ASN program who complete NUR 248 with a grade of "C" or better will receive advanced credit and begin the nursing sequence of courses with the 200 level of coursework. Completion of NUR 248 coupled with the LPN education and experience brings the LPN to the same level as the generic ASN student upon entering the second year of study in the program.

Graduates of the ASN program are eligible to take the NCLEX-RN examination to become registered nurses. Graduates may seek immediate employment as nurses or choose to transfer their credits to a four-year institution offering a baccalaureate degree.

Those interested in the program are encouraged to contact the nearest campus offering a program for information concerning course and program offerings. Students graduating from the ASN program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- *Associate of Science  
(67-68 Credits)*

### Specialties Offered:

*None*

### Program Available at:

*Bloomington  
Evansville  
Gary  
Indianapolis  
Lafayette  
Madison  
Muncie  
Richmond  
Sellersburg  
South Bend*

# A.S. in Nursing

## Associate of Science

To earn this degree,  
you must have  
67-68 credits in the  
following areas:

General Education Core	21
Technical Core	40
Specialty Core	N/A
Locally Determined Courses	6-7

### You Must Have

### Required Courses

**Credit Hours**

GENERAL EDUCATION	Required Courses	Credit Hours
ANP 101	Anatomy and Physiology I	3
ANP 102	Anatomy and Physiology II	3
BIO 211	General Microbiology	3
**COM 101	Fundamentals of Public Speaking	3
	OR	
**COM 102	Interpersonal Communication	3
ENG 111	English Composition	3
MAT 111	Intermediate Algebra	3
PSY 101	Introduction to Psychology	3
TECHNICAL		
NUR 150	Nursing and Universal Needs	4
NUR 151	Nursing and Universal Needs Practicum	4
NUR 152	Nursing Related to Health Deviation I	5
NUR 153	Nursing Related to Health Deviation I Practicum	5
NUR 154	Pharmacotherapeutics	2
^NUR 250	Nursing Related to Health Deviation II	5
^NUR 251	Nursing Related to Health Deviation II Practicum	5
^NUR 252	Nursing Related to Developmental Needs	4
^NUR 253	Nursing Related to Developmental Needs Practicum	4
NUR 254	Professional Nursing Issues	2
OTHER REQUIRED COURSES (6-7 CREDITS FROM THESE COURSES, DETERMINED LOCALLY)	Required Courses	Credit Hours
ANP 201	Advanced Human Physiology	4
CHM 101	Chemistry I	3
CIS 101	Introduction to Microcomputers	3
PSY 201	Lifespan Development	3
SOC 111	Introduction to Sociology	3

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Dental Assistant

## Program Description

Students in the Dental Assistant program receive instruction in preparing patients for treatment and in chairside assisting as the dentist examines and treats patients. The dental assistant will expose and process X-ray films, sterilize instruments, provide oral health instruction, and assist with record keeping and other office management practices. Students gain necessary knowledge and skills in general education, basic science, dental anatomy and materials, chairside assisting, laboratory techniques, radiology and basic office procedure. In addition to academic and clinical course work on campus, students are provided with practical experience in dental offices under the supervision of College and dental office personnel.

A one-year program requiring 39 credits leads to a technical certificate. Graduates are eligible to take the certification exam administered by the Dental Assisting National Board, Inc. Students graduating from the Dental Assistant program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- Technical Certificate  
(39 Credits)

### Specialties Offered:

None

### Program Available at:

Lafayette

## Technical Certificate

To earn this degree,  
you must have 39  
credits in the  
following areas:

General Education Core	6
Technical Core	33
Specialty Core	N/A
Locally Determined Courses	N/A

### You Must Have

	Required Courses	Credit Hours
GENERAL EDUCATION	COM 102      Introduction to Interpersonal Communication ENG 111      English Composition	3 3
TECHNICAL	DEN 102      Dental Materials and Laboratory I DEN 115      Preclinical Practice I DEN 116      Dental Emergencies/Pharmacology DEN 117      Dental Office Management DEN 118      Dental Radiography DEN 122      Clinical Practicum I DEN 123      Dental Anatomy DEN 124      Preventive Dentistry/Diet and Nutrition DEN 125      Preclinical Practice II DEN 129      Dental Materials and Laboratory II DEN 130      Clinical Practicum II DEN 131      Basic Integrated Science	3 4 2 2 4 1 2 2 3 3 5 2

# Medical Assistant

## Program Description

The graduate of the Medical Assistant program is a professional, multi-skilled person dedicated to assisting in patient care management, primarily in a physician's office. The practitioner performs administrative and clinical duties and may manage emergency situations, facilities and/or personnel. Competence in the field also requires that a medical assistant display professionalism, communicate effectively and provide instruction to patients. A required externship under the direct supervision of a physician provides valuable on-the-job experience.

Graduates of the AAS (Medical Assistant Specialty) and TC (Generalist Specialty) in the Medical Assistant Program will be prepared to take the Certification Examination of the American Association of Medical Assistants (AAMA) and the American Medical Association (AMA).

The two-year associate of applied science program requires 63 credits for completion. Technical and career development certificates also are available. The availability of degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses.

Students graduating from the Medical Assistant program participate in evaluations of proficiency in general and technical education. Associate degree graduates of the Medical Assistant program may seek immediate employment as medical assistants or, with the Medical Assistant specialty, choose to transfer to the University of Southern Indiana and complete a bachelor of science degree in Health Services.

### Degrees Available:

- Associate of Applied Science (63 Credits)
- Technical Certificate (30-48 Credits)

### Specialties Offered:

- Administrative
- Clinical
- Generalist
- Massage Therapy
- Pharmacy Technician

### Program Available at:

*Anderson  
Columbus  
Evansville  
Elkhart  
Fort Wayne  
Indianapolis  
Kokomo  
Lafayette  
Lawrenceburg (pending)  
Madison  
Marion  
Michigan City  
Muncie  
Richmond  
Sellersburg  
South Bend  
Terre Haute*

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Medical Assistant

## Associate of Applied Science

To earn this degree, you must have 63-66 credits in the following areas:

General Education Core	18
Technical Core	18
Specialty Core	18-21
Locally Determined Courses	6-12

### You Must Have

	Required Courses	Credit Hours
GENERAL EDUCATION	ANP 101 Anatomy and Physiology I ANP 102 Anatomy and Physiology II ENG 111 English Composition * English/Communications Elective *MAT Math Elective * Humanities/Social Sciences Elective	3 3 3 3 3 3
TECHNICAL	HHS 101 Medical Terminology HHS 102 Medical Law and Ethics HHS 104 CPR and Basic Health Awareness MEA 113 Pharmacology MEA 131 Medical Financial Management with Computer Applications MEA 136 Office Administration with Computer Applications ^MEA 203 Disease Conditions	3 2 1 3 3 3 3
MEDICAL ASSISTANT SPECIALTY (27 CREDITS)	MEA 114 M.A. Lab Techniques MEA 120 M.A. Clinical Extern MEA 121 M.A. Administrative Extern MEA 135 Medical Word Processing/Transcription MEA 137 Medical Insurance and Basic Coding with Computer Applications MEA 138 Clinical I MEA 139 Clinical II Locally Determined Courses	3 3 3 3 3 3 3
MASSAGE THERAPY SPECIALTY (30 CREDITS)	MEA 160 Massage Technician Training 1 MEA 161 Massage Technician Training 2 MEA 163 Holistic Approach to Massage Therapy MEA 165 Accupressure Theory and Methods MEA 168 Hydro/Thermodynamics MEA 169 Administrative Training MEA 263 Infant, Child and Pregnancy Massage Locally Determined Courses	3 3 3 3 1 2 3 12

# Medical Assistant

## Technical Certificate

To earn this degree, you must have 30-48 credits in the following areas:

General Education Core	6
Technical Core	3
Specialty Core	5-39
Locally Determined Courses	0-16

### You Must Have

#### GENERAL EDUCATION

*	English/Communications Elective	3
*	Science/Mathematics/Humanities Elective	3

#### TECHNICAL

HHS 101	Medical Terminology	3
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### Choose One of the Following Specialties

#### ADMINISTRATIVE SPECIALTY (21 CREDITS)

HHS 102	Medical Law and Ethics	2
MEA 136	Office Administration with Computer Applications	3
	Locally Determined Courses	16

#### CLINICAL SPECIALTY (21 CREDITS)

ANP 101	Anatomy and Physiology I AND	3
ANP 102	Anatomy and Physiology II OR	3
PNU 126	Integrated Life Science Locally Determined Courses	5 15-16

#### GENERALIST SPECIALTY (38-39 CREDITS)

ANP 101	Anatomy and Physiology I AND	3
ANP 102	Anatomy and Physiology II OR	3
PNU 126	Integrated Life Science	5
HHS 102	Medical Law and Ethics	2
HHS 104	CPR and Basic Health Awareness	1
MEA 113	Pharmacology	3
MEA 114	M.A. Lab Techniques	3
MEA 120	M.A. Clinical Extern	3
MEA 121	M.A. Administrative Extern	3
MEA 131	Medical Financial Management with Computer Applications	3
MEA 135	Medical Word Processing/Transcription	3
MEA 136	Office Administration with Computer Applications	3
MEA 137	Medical Insurance and Basic Coding with Computer Applications	3
MEA 138	Clinical I	3
MEA 139	Clinical II	3

**Specialties Continued Next Page**

# Medical Assistant

## Technical Certificate - Specialties

		Required Courses	Credit Hours
MASSAGE THERAPY SPECIALTY (22 CREDITS)		ANP 101 Anatomy & Physiology I ANP 102 Anatomy & Physiology II MEA 102 First Aid and CPR MEA 160 Massage Technician Training I MEA 161 Massage Technician Training II MEA 162 Legal and Ethical Aspects of Massage Therapy MEA 163 Holistic Approach to Massage Therapy MEA 164 Emotional Transference MEA 165 Acupressure Theory and Methods	3 3 2 3 3 1 3 1 3
PHARMACY TECHNICIAN SPECIALTY (21-22 CREDITS)		ANP 101 Anatomy and Physiology I AND ANP 102 Anatomy and Physiology II OR PNU 126 Integrated Life Science CIS 101 Introduction to Microcomputers HHS 102 Medical Law and Ethics MEA 113 Pharmacology MEA 151 Pharmacy Technician I MEA 152 Pharmacy Technician II MEA 154 Pharmacy Externship	3 3 5 3 2 3 3 3 2

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Medical Laboratory Technician

## Program Description

### Degrees Available:

- Associate of Applied Science (67 Credits)

### Specialties Offered:

None

### Program Available at:

South Bend  
Terre Haute

The Medical Laboratory Technician program is designed to prepare graduates to work in clinics, physicians' offices, hospitals and research laboratories as medical laboratory technicians. Medical laboratory technicians perform laboratory procedures, define and solve associated problems, and use quality control techniques to aid in the diagnosis, treatment and monitoring of patients. Courses in bacteriology, parasitology, chemistry, hematology, immunology, anatomy, physiology and immunohematology provide both theory and practical applications.

The associate of applied science degree program requires 67 credits. Students graduating from the Medical Laboratory Technician program participate in evaluations of proficiency in general and technical education.

# Medical Laboratory Technician

## Associate of Applied Science

To earn this degree,  
you must have 67  
credits in the  
following areas:

General Education Core	18
Technical Core	31
Other Required Courses	18
Locally Determined Courses	N/A

### You Must Have

#### Required Courses

#### Credit

#### Hours

##### GENERAL EDUCATION

#ANP 101	Anatomy and Physiology I	3
#ANP 102	Anatomy and Physiology II	3
#BIO 111	General Microbiology	3
**COM 101	Fundamentals of Public Speaking OR **COM 102	3
ENG 111	Introduction to Interpersonal Communication	3
MAT 111	English Composition	3
**PSY 101	Intermediate Algebra	3
**SOC 111	Introduction to Psychology OR Introduction to Sociology	3

# Must take two of these three courses. Which two you must take will be determined locally.

##### TECHNICAL

CHM 101	Chemistry I	3
HHS 102	Medical Law and Ethics	2
MLT 101	Fundamentals of Laboratory Techniques	3
MLT 102	Routine Analysis Techniques	3
MLT 201	Immunology Techniques	3
MLT 202	Immunohematology Techniques	3
MLT 205	Hematology Techniques I	3
MLT 206	Hematology Techniques II	3
MLT 207	Chemistry Techniques I	3
MLT 222	Microbiology Techniques	3
MLT 227	Chemistry Techniques II	2

##### OTHER REQUIRED COURSES

MLT 209	Routine Analysis Applications	1
MLT 210	Hematology Applications	3
MLT 212	Immunology Applications	1
MLT 213	Immunohematology Applications	3
MLT 215	Parasitology and Mycology	1
^MLT 218	Clinical Pathology	3
MLT 221	Microbiology Applications	3
MLT 224	Chemistry Applications	3

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Occupational Therapy Assistant

## \*Program Description

Occupational therapy directs an individual's participation in selected tasks to restore, reinforce and enhance performance, facilitate learning of those skills and functions essential for adaptation and productivity, diminish or correct pathology, and promote and maintain health. An occupational therapy assistant provides service to individuals whose abilities to cope with living tasks have been threatened or impaired by developmental deficits, the aging process, physical injury or illness, or psychological disability. The profession serves a diverse population in a variety of settings such as hospitals and clinics, rehabilitation facilities, long-term care facilities, extended care facilities, sheltered workshops, schools and camps, private homes and community agencies.

Students graduating from the Occupational Therapy Assistant program participate in evaluations of proficiency in general and technical education. Graduates of the program will be able to sit for the national certification examination for the Occupational Therapy Assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a certified Occupational Therapy Assistant (COTA). Most states, including Indiana, require a license to practice.

\*NOTE: A new class is not being admitted in 2000-2001.

### Degrees Available:

- Associate of Science  
(72 Credits)

### Specialties Offered:

*None*

### Program Available at:

*Indianapolis\**

# Occupational Therapy Assistant

## Associate of Science

To earn this degree,  
you must have 72  
credits in the  
following areas:

General Education Core	31
Technical Core	26
Other Required Courses	15
Locally Determined Courses	N/A

## You Must Have

## Required Courses

## Credit Hours

GENERAL EDUCATION	ANP 101	Anatomy and Physiology I	3
	ANP 102	Anatomy and Physiology II	3
	ANP 201	Advanced Human Physiology	4
	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	**MAT 111	Intermediate Algebra	3
		OR	
	**MAT 112	Functional Mathematics	3
	PSY 101	Introduction to Psychology	3
	PSY 201	Lifespan Development	3
	PSY 205	Abnormal Psychology	3
	SOC 111	Introduction to Sociology	3
TECHNICAL	OTA 101	Foundations of Occupational Therapy	3
	OTA 102	Kinesiology	2
	OTA 103	Medical Conditions in Occupational Therapy	3
	OTA 202	Therapeutic Activities	3
	OTA 203	Therapeutic Group Activities	3
	OTA 204	Psychiatric Conditions in Occupational Therapy	3
	OTA 205	COTA in Physical Health	3
	OTA 208	COTA and Interactive Model	3
	OTA 210	COTA in Mental Health	3
OTHER REQUIRED COURSES (15 CREDITS)	OTA 201	Field Work 1 - A	1
	OTA 206	Assistive Technology and Adaptive Equipment	2
	OTA 207	Daily Living Skills	3
	OTA 209	Field Work 1 - B	1
	OTA 211	Clinical Transition and Management	4
	OTA 212	Field Work 2 - A	2
	OTA 213	Field Work 2 - B	2

**Key** (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capstone Course

# Paramedic Science

## Program Description

The Paramedic Science program prepares competent health care providers who possess the professional qualities required to function in the uncontrolled environment of emergency medicine in the pre-hospital setting. The program qualifies graduates for state certification as emergency medical technician-paramedics. Students will gain the knowledge and skills to manage the hostile environment of accidents and traumatic occurrences in the pre-hospital setting including disentanglement, controlling armed encounters, accomplishing rescue techniques and demonstrating patient care procedures. The curriculum includes clinical and practical instruction as well as a field internship in advanced emergency care and services. The degree requires 65.5 credit hours for completion. Students graduating from the Paramedic Science program participate in evaluations of proficiency in general and technical education.

## Degrees Available:

- *Associate of Applied Science (65.5 Credits)*

## Specialties Offered:

None

## Program Available at:

*Evansville  
Kokomo  
Terre Haute*

# Paramedic Science

## Associate of Applied Science

To earn this degree,  
you must have 65.5  
credits in the  
following areas:

General Education Core	18
Technical Core	47.5
Specialty Core	N/A
Locally Determined Courses	N/A

### You Must Have

#### Required Courses

#### Credit Hours

##### GENERAL EDUCATION

ANP 101	Anatomy and Physiology I	3
ANP 102	Anatomy and Physiology II	3
COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
MAT 111	Intermediate Algebra	3
PHL 102	Introduction to Ethics	3

##### TECHNICAL

PAR 102	Emergency Medical Technician-Basic Training	7.5
PAR 113	Preparatory I	2.5
PAR 114	Preparatory II	3.5
PAR 115	Airway, Patient Assessment	5
PAR 200	Trauma	3
PAR 210	Medical I	6
PAR 213	Medical II	6.5
PAR 215	Special Considerations	5
PAR 220	Operations	2.5
PAR 221	Ambulance Internship	6

# Physical Therapist Assistant

## Program Description

A physical therapist assistant is a health care worker who is educated at the associate degree level and carries out many patient-care functions under the supervision of the physical therapist. The program provides the student with the cognitive and affective competencies to administer therapeutic and psychosocial support for individuals with musculoskeletal, neurological, sensorimotor, cardiopulmonary, vascular or other physiological dysfunctions. The physical therapist assistant works under the supervision of a physical therapist in a variety of clinical settings that may include a hospital, nursing home, wellness center, athletic facility, private office or home. Physical therapist assistants (PTAs) may include in their duties application of hot and cold modalities, massage, therapeutic exercise, gait training, adjusting and fitting of braces and splints, electrical stimulation, biofeedback and patient and family education.

The required course work for the A.S. in Physical Therapist Assistant totals 66 hours and is comprised of 42 semester hours of technical course work and 24 hours of general education. A cooperative program with community hospitals and facilities allows the student to gain the necessary patient contact and clinical experience. Students graduating from the Physical Therapist Assistant program participate in evaluations of proficiency in general and technical education. Graduates of the program will be able to sit for the Physical Therapist Assistant licensure examination, administered under the direction of the Indiana State Health Professions Bureau. Most states, including Indiana, require a license to practice.

### Degrees Available:

- Associate of Science  
(66 Credits)

### Specialties Offered:

*None*

### Program Available at:

*Gary  
Muncie*

# Physical Therapist Assistant

## Associate of Science

To earn this degree,  
you must have 66  
credits in the  
following areas:

General Education Core	24
Technical Core	42
Specialty Core	N/A
Locally Determined Courses	N/A

### You Must Have

### Required Courses

**Credit  
Hours**

#### GENERAL EDUCATION

ANP 101	Anatomy and Physiology I	3
ANP 102	Anatomy and Physiology II	3
**COM 101	Fundamentals of Public Speaking	3
	OR	
**COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
**MAT 111	Intermediate Algebra	3
	OR	
**MAT 112	Functional Mathematics	3
PSY 101	Introduction to Psychology	3
SOC 111	Introduction to Sociology	3
SCI 111	Physical Science	3

#### TECHNICAL

PTA 101	Introduction to Physical Therapist Assisting	3
PTA 102	Diseases, Trauma, and Terminology	3
PTA 103	Administrative Aspects of Physical Therapist Assisting	3
PTA 106	PTA Treatment Modalities I	5
PTA 107	Kinesiology	5
PTA 115	Clinical I	2
PTA 205	Clinical II	5
PTA 207	PTA Treatment Modalities II	5
PTA 215	Clinical III	5
PTA 217	PTA Treatment Modalities III	5
PTA 224	Current Issues and Review	1

**Key** (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capstone Course

# Practical Nursing

## Degrees Available:

- *Technical Certificate  
(51-52 Credits)*

## Program Description

The licensed practical nurse (LPN) is an integral part of the health care team. The Practical Nursing program is a one-year course of study leading to a technical certificate. This accredited program prepares the individual to take the state licensure exam to become a licensed practical nurse. The program is designed for students to gain knowledge and technical skills necessary to care appropriately for patients in a variety of health care settings such as hospitals, convalescent centers and physicians' offices. Students learn to administer medications and treatments commonly performed by licensed practical nurses. All courses must be completed with a grade of "C" or better.

Career and educational mobility are also provided for those who wish to progress to the Associate of Science in Nursing level. A description of this transition is found in the Associate of Science in Nursing program description.

## Specialties Offered:

- None*

## Program Available at:

*Anderson  
Bloomington  
Columbus  
Elkhart  
Evansville  
Fort Wayne  
Gary  
Greencastle  
Indianapolis  
Kokomo  
Lafayette  
Madison  
Muncie  
Richmond  
Sellersburg  
South Bend  
Terre Haute  
Valparaiso*

# Practical Nursing

## Technical Certificate

To earn this degree,  
you must have  
51-52 credits in the  
following areas:

General Education Core	6
Technical Core	45-46
Specialty Core	N/A
Locally Determined Courses	N/A

### You Must Have

#### GENERAL EDUCATION

	Required Courses	Credit Hours
ENG 111	English Composition	3
PSY 101	Introduction to Psychology	3

#### TECHNICAL

PNU 114	Nursing Issues and Trends	1
PNU 121	Introduction to Nursing I	4
PNU 122	Introduction to Nursing II	6
PNU 123	Pharmacology	3
**PNU 126	Integrated Life Science OR	5
**ANP 101	Anatomy and Physiology I AND	3
**ANP 102	Anatomy and Physiology II	3
PNU 127	Care of the Adult I	5
PNU 128	Care of the Adult II	5
PNU 129	Care of the Adult III	5
PNU 130	Nursing Care of the Older Adult	5
PNU 131	Nursing Care of the Child-Bearing Family	6

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Radiologic Technology

## Program Description

The radiologic technologist prepares and positions patients for X-rays, determines the proper voltage, current, and exposure time, and operates the equipment. Radiologic technologists work in hospitals, medical laboratories, physicians' and dentists' offices and clinics, federal and state health agencies, and certain educational institutions.

The associate of applied science program includes courses in the following areas: radiologic technique, exposure, positioning, protection, radiation physics and ethics. Clinical practice and supplemental instruction are provided in accredited hospitals. Upon completion of program requirements, graduates are eligible to take the National Registry Examination.

Students graduating from the Radiologic Technology program participate in evaluations of proficiency in general and technical education. Graduates of the Radiologic Technology program may seek immediate employment as radiologic technologists or choose to transfer to the University of Southern Indiana and complete a baccalaureate degree in radiologic fields.

### Degrees Available:

- *Associate of Applied Science (84 Credits)*

### Specialties Offered:

*None*

### Program Available at:

*Columbus  
Indianapolis  
Marion  
Terre Haute*

# Radiologic Technology

## Associate of Applied Science

To earn this degree,  
you must have 84  
credits in the  
following areas:

General Education Core	18
Technical Core	63
Specialty Core	N/A
Locally Determined Courses	3

### You Must Have

### Required Courses

**Credit  
Hours**

#### GENERAL EDUCATION

ANP 101	Anatomy and Physiology I	3
ANP 102	Anatomy and Physiology II	3
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
MAT 111	Intermediate Algebra	3
**PSY 101	Introduction to Psychology OR	3
**SOC 111	Introduction to Sociology	3

#### TECHNICAL

CLS 101	Introduction to Microcomputers	3
HHS 101	Medical Terminology	3
HHS 102	Medical Law and Ethics	2
PNU 123	Pharmacology	3
RAD 101	Orientation/Nursing X-Ray Technology	4
RAD 102	Principles of Radiographic Exposures I	2
RAD 103	Radiographic Positioning I	3
RAD 104	X-Ray Clinical Education I	4
RAD 105	Radiographic Positioning II	3
RAD 106	X-Ray Clinical Education II	4
RAD 107	Radiation Physics	3
RAD 109	Imaging Techniques	2
RAD 201	Radiographic Positioning III	2
RAD 202	X-Ray Clinical Education III	4
RAD 203	X-Ray Clinical Education IV	4
RAD 204	X-Ray Clinical Education V	4
RAD 205	Pathology for Radiologic Technology	2
RAD 206	Radiobiology and Radiation Protection	3
RAD 208	Principles of Radiographic Exposures II	2
RAD 209	Radiographic Positioning IV	3
^RAD 299	General Examination Review	3
	Locally Determined Courses	3

**Key** (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capsone Course

# Respiratory Care

## Program Description

A respiratory care practitioner is an allied health professional who works under the direction of physicians in the diagnosis, evaluation, treatment, education and care of patients with cardiopulmonary diseases or abnormalities.

A graduate of the associate of applied science/associate of science program will be eligible to take the entry level and advanced practitioner exams given by the National Board for Respiratory Care (NBRC). Successful examination candidates will be awarded the Registered Respiratory Therapist credential. Graduates of the technical certificate program will be eligible to take the entry-level practitioner exam given by the NBRC. Successful exam candidates will be awarded the Certified Respiratory Therapy Technician credential.

The two-year associate of applied science degree requires 79 credits for completion. An associate of science degree is available at selected campuses. The availability of degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses.

Students graduating from the Respiratory Care program participate in evaluations of proficiency in general and technical education.

## Degrees Available:

- Associate of Science / Associate of Applied Science (79 Credits)

## Specialties Offered:

None

## Program Available at:

Fort Wayne  
Indianapolis  
Lafayette  
Michigan City

# Respiratory Care

## Associate of Applied Science / Associate of Science

To earn this degree,  
you must have 79  
credits in the  
following areas:

General Education Core	24
Technical Core	55
Specialty Core	N/A
Locally Determined Courses	N/A

### You Must Have

#### GENERAL EDUCATION

	Required Courses	Credit Hours
ANP 101	Anatomy and Physiology I	3
ANP 102	Anatomy and Physiology II	3
BIO 211	General Microbiology	3
CHM 101	Chemistry I	3
ENG 111	English Composition	3
ENG 211	Technical Writing	3
MAT 111	Intermediate Algebra	3
PSY 101	Introduction to Psychology	3

#### TECHNICAL

RES 121	Introduction to Respiratory Care	6
RES 122	Therapeutic Modalities	3
RES 123	Cardiopulmonary Physiology	3
RES 124	Clinical Practicum I	3
RES 125	Critical Care I	3
RES 126	Clinical Medicine I	3
RES 127	Clinical Practicum II	3
RES 128	Clinical Practicum III	9
RES 221	Cardiopulmonary Diagnostics	3
RES 222	Critical Care II	3
RES 223	Respiratory Pharmacology	3
^RES 224	Clinical Medicine II	3
RES 226	Continuing Care	2
RES 227	Clinical Practicum IV	6
RES 229	Emergency Management	2

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Surgical Technology

## Program Description

The surgical technologist is a member of the surgical team, qualified by didactic and clinical education to provide safe and efficient care to the patient in the operating room. Instruction consists of courses in anatomy and physiology, microbiology, pharmacology, medical law and ethics, surgical techniques and surgical procedures.

Closely supervised clinical education is provided in local area hospitals. The surgical technologist actively participates in surgery by performing scrub and/or circulating duties which include passing instruments and supplies to surgical team members, preparing and positioning the patient, operating equipment, assisting the anesthesiologist and keeping accurate records. Obstetrical and emergency room clinical experiences may be provided by specific hospitals. The two-year associate of applied science program requires 67 credits.

Students graduating from the Surgical Technology program participate in evaluations of proficiency in general and technical education. Associate degree graduates of the Surgical Technology program may seek immediate employment as surgical technologists or choose to transfer to the University of Southern Indiana and complete a bachelor of science degree in Health Services.

### Degrees Available:

- *Associate of Applied Science (67 Credits)*

### Specialties Offered:

None

### Program Available at:

*Columbus  
Evansville  
Indianapolis  
Lafayette  
Michigan City  
Muncie  
Terre Haute*

# Surgical Technology

## Associate of Applied Science

To earn this degree,  
you must have 67  
credits in the  
following areas:

General Education Core	21
Technical Core	46
Other Required Courses	N/A
Locally Determined Courses	N/A

### You Must Have

#### Required Courses

Credit  
Hours

#### GENERAL EDUCATION

ANP 101	Anatomy and Physiology I	3
ANP 102	Anatomy and Physiology II	3
BIO 211	General Microbiology	3
COM 101	Fundamentals of Public Speaking	3
	OR	
COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
*MAT	Mathematics Elective	3
*	Humanities/Social Science Elective	3

#### TECHNICAL

HHS 101	Medical Terminology	3
HHS 102	Medical Law and Ethics	2
MEA 113	Pharmacology	3
SUR 111	Fundamentals of Surgical Technology	4
SUR 112	Application of Surgical Fundamentals	2
SUR 113	Surgical Procedures I	3
SUR 114	Clinical Applications I	3
SUR 211	Surgical Procedures II	6
SUR 212	Clinical Applications II	9
SUR 213	Surgical Procedures III	3
SUR 214	Clinical Applications III	8

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course



# Public Services

The Public Services Division is made up of Ivy Tech programs in Early Childhood Education, Hospitality Administration, Human Services, Paralegal and Public Safety.

Programs in this division are characterized by heavy involvement with areas of the public sector. Both the educational environment and the employment settings for many graduates are concerned with various aspects of social services such as early childhood education and human services. Hospitality, paralegal and public safety are associated with providing services to diverse sectors of the community.



Many of these programs are recognized and accredited by appropriate external accrediting agencies. Students should contact the local Ivy Tech campus for information concerning programs and course offerings.

# Early Childhood Education

## Program Description

The Early Childhood Education program focuses on early childhood growth and development, including adult-child relationships. Emphasis is placed on the development of skills and techniques for providing appropriate environments and care for young children. Instruction is provided in the physical, emotional, social and cognitive areas of early childhood. The student develops competencies through classroom instruction, observation and participation in early childhood settings.

Employment opportunities include day care, nursery school, Head Start, family day care, pediatrics setting, nanny care, school aide, school age care, employer-sponsored day care, infant/toddler care, resource and referral services, intergenerational care, respite/sick care and other settings.

The two-year associate of applied science degree program requires 63 credits. A technical certificate also is available. An associate of science degree transfers to Ball State University's baccalaureate program in Family and Consumer Sciences. The Early Childhood Education program is available via distance education for interested students. Contact the nearest Ivy Tech campus for information and to enroll. The availability of degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Early Childhood Education program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- *Associate of Applied Science (63 Credits)*
- *Technical Certificate (30 Credits)*

### Specialties Offered:

- *Administration*
- *Curriculum*
- *Generalist*
- *Infant/Toddler*

### Program Available at:

*Columbus  
Evansville  
Fort Wayne  
Gary  
Indianapolis  
Lafayette  
Logansport  
Muncie  
Richmond  
South Bend (Pending)  
Terre Haute*

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Early Childhood Education

## Associate of Applied Science

To earn this degree,  
you must have 63  
credits in the  
following areas:

General Education Core	18
Technical Core	27
Specialty Core	18
Locally Determined Courses	N/A

### You Must Have

### Required Courses

**Credit  
Hours**

#### GENERAL EDUCATION

ENG 111	English Composition	3
*ENG 112	Exposition and Persuasion OR * ENG 211	3
	Technical Writing OR	3
*COM 102	Introduction to Interpersonal Communication	3
*MAT 111	Intermediate Algebra OR	3
*MAT 112	Functional Mathematics	3
PSY 101	Introduction to Psychology	3
*	Life/Physical Sciences Elective	3
SOC 111	Introduction to Sociology	3

#### TECHNICAL

CHD 122	Child Growth and Development	3
CHD 124	Developmental and Cultural Awareness	3
CHD 142	Beginnings in Child Development	3
CHD 143	Curriculum in the Early Childhood Classroom	3
CHD 144	Reflections on Practice	3
CHD 202	Family/Teacher Partnership Skills	3
CHD 206	Early Childhood Administration	3
CHD 209	Families in Transition	3
^CHD 251	Early Childhood Professionalism	3

### Choose One of the Following Specialties

#### ADMINISTRATION SPECIALTY (18 CREDITS)

Must include three of the first five courses below:

*CHD 145	CDA Process	3
*CHD 155	Generalist Practicum	3
*CHD 165	Infant/Toddler Practicum	3
*CHD 175	Preschool Practicum	3
*CHD 185	School Age Practicum	3
CHD 216	The Exceptional Child	3
CHD 220	Leadership and Mentoring in the Early Childhood Profession	3
CHD 242	Curriculum Planning for Early Childhood Administration	3

**Specialties Continued Next Page**

# Early Childhood Education

## Associate of Applied Science—Specialties

	Required Courses	Credit Hours
CURRICULUM SPECIALTY (18 CREDITS)	<p>Must include two of the first five courses below:</p> <p>*CHD 145 CDA Process *CHD 155 Generalist Practicum *CHD 165 Infant/Toddler Practicum *CHD 175 Preschool Practicum *CHD 185 School Age Practicum</p> <p>Must take one of the two courses below:</p> <p>*CHD 211 School Age Child Care *CHD 213 Infant/Toddler Care Programming CHD 221 Emerging Literacy in Young Children CHD 225 Cognitive Curriculum CHD 242 Curriculum Planning for Early Childhood Administration</p>	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
GENERALIST SPECIALTY (18 CREDITS)	<p>Must include three of the first five courses below:</p> <p>*CHD 145 CDA Process *CHD 155 Generalist Practicum *CHD 165 Infant/Toddler Practicum *CHD 175 Preschool Practicum *CHD 185 School Age Practicum</p> <p>CHD 216 Exceptional Child CHD 221 Emerging Literacy in Young Children CHD 225 Cognitive Curriculum</p>	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
INFANT/TODDLER SPECIALTY (18 CREDITS)	<p>CHD 113 Environments for Infants and Toddlers CHD 120 Infant/Toddler Growth and Development</p> <p>Must take two of the three courses below:</p> <p>*CHD 145 CDA Process *CHD 155 Generalist Practicum *CHD 165 Infant/Toddler Practicum CHD 213 Infant Care Programming CHD 216 Exceptional Child OR CHD 217 Skills for Parenting</p>	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3

# Early Childhood Education

## Associate of Science

To earn this degree,  
you must have  
63 credits in the  
following areas:

General Education Core	27
Technical Core	36
Specialty Core	N/A
Locally Determined Courses	N/A



Curriculum designed for  
transfer to Ball State  
University's baccalaureate  
program in Family and  
Consumer Sciences

### You Must Have

#### GENERAL EDUCATION

	Required Courses	Credit Hours
ARH 101	Survey of Art and Culture I	3
BIO 101	Introductory Biology	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion	3
HSY 101	Survey of American History I	3
MAT 112	Functional Mathematics	3
PHL 101	Introduction to Philosophy	3
PSY 101	Introduction to Psychology	3
SOC 111	Introduction to Sociology	3

#### TECHNICAL

CHD 122	Child Growth and Development	3
CHD 124	Developmentally Appropriate Guidance in a Cultural Context	3
CHD 142	Beginnings in Child Development	3
CHD 143	Curriculum in the Early Childhood Classroom	3
CHD 144	Reflections on Practice in Early Childhood	3
CHD 145	CDA Process	3
	OR	
CHD 155	Generalist Practicum	3
CHD 206	Early Childhood Administration	3
CHD 209	Families in Transition	3
CHD 216	The Exceptional Child	3
CHD 217	Skills for Parenting	3
CHD 221	Emerging Literacy in Young Children	3
CHD 251	Early Childhood Professionalism	3

### Key (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capstone Course

# Early Childhood Education

## Technical Certificate

To earn this degree,  
you must have 30  
credits in the  
following areas:

General Education Core	6
Technical Core	24
Specialty Core	N/A
Locally Determined Courses	N/A

You Must Have	Required Courses	Credit Hours	
GENERAL EDUCATION	ENG 101 **PSY 101 **SOC 111	English Composition Introduction to Psychology OR Introduction to Sociology	3 3 3
TECHNICAL	CHD 122 CHD 124 CHD 142 CHD 143 CHD 144 CHD 145 CHD 155 CHD 216 CHD 221	Child Growth and Development Developmentally Appropriate Guidance in a Cultural Context Beginnings in Child Development Curriculum in the Early Childhood Classroom Reflections on Practice in Early Childhood CDA Process OR Generalist Practicum The Exceptional Child Emerging Literacy in Young Children	3 3 3 3 3 3 3 3 3

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Hospitality Administration

## Program Description

The Hospitality Administration program emphasizes the techniques of such hospitality leaders as Ritz, Escoffier, Statler, Hilton and Marriott. By choosing a specialty area, students begin building leadership skills for the profession of welcoming and serving guests. The hospitality programs offered by Ivy Tech produce graduates who can perform well in the hospitality industry. Specialties are available in baking and pastry arts, culinary arts, food service (technical certificate only), hotel and restaurant management, and casino management. A two-year program requiring 64-66 credits leads to an associate of applied science degree. Technical certificates and career development certificates are also available. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Hospitality Administration program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- *Associate of Applied Science (64-66 Credits)*
- *Technical Certificate (30-33 Credits)*

### Specialties Offered:

- *Baking & Pastry Arts*
- *Casino Management*
- *Culinary Arts*
- *Hotel & Restaurant Management*
- *Food Service (TC only)*

### Program Available at:

*East Chicago  
Fort Wayne  
Gary  
Indianapolis  
Michigan City  
South Bend*

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Hospitality Administration

## Associate of Applied Science

To earn this degree,  
you must have  
64-66 credits in the  
following areas:

General Education Core	18
Technical Core	18
Specialty Core	19-30
Locally Determined Courses	0-11

### You Must Have

#### GENERAL EDUCATION

Required Courses		Credit Hours
COM 101	Fundamentals of Public Speaking	3
*ECN	Economics Elective	3
ENG 111	English Composition	3
**MAT 111	Intermediate Algebra	3
	OR	
**MAT 112	Functional Mathematics	3
*	Humanities/Social Sciences Elective	3
*	Life/Physical Sciences Elective	3

#### TECHNICAL

HOS 101	Sanitation and First Aid	3
HOS 102	Basic Foods Theory and Skills	3
HOS 104	Nutrition	3
HOS 109	Hospitality Purchasing	2
HOS 201	Hospitality Organization and Human Resource Management	3
HOS 203	Menu, Design, and Layout	2
HOS 204	Food and Beverage Cost Control	2

### Choose One of the Following Specialties

#### BAKING & PASTRY ARTS SPECIALTY (30 CREDITS)

BKR 101	Yeast Breads I	3
BKR 102	Yeast Breads II	3
BKR 103	Merchandising	3
BKR 104	Baking Science	3
BKR 201	Cakes, Icings, and Fillings	3
BKR 202	Advanced Decorating/Candies	3
HOS 105	Introduction to Baking	3
HOS 106	Pantry and Breakfast	3
HOS 207	Advanced Baking and Chocolates	3
^HOS 280	Co-op/Internship/Externship/Practicum	3

### Specialties Continued Next Page

**Key** (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capstone Course

# Hospitality Administration

## Associate of Applied Science—Specialties

		Required Courses	Credit Hours
CASINO MANAGEMENT SPECIALTY (30 CREDITS)	^BUS 204 HOS 132 HOS 141 HOS 231	Case Problems in Business Techniques of Casino Games: Blackjack Introduction to Casino Operations Techniques of Casino Games: Craps-Subsequent Locally Determined Courses	3 6 3 7 11
CULINARY ARTS SPECIALTY (30 CREDITS)	CUL 110 CUL 207 CUL 212 HOS 103 HOS 105 HOS 106 HOS 108 HOS 202 ^HOS 280	Meat Cutting Classical Cuisine Fish and Seafood Soups, Stocks, and Sauces Introduction to Baking Pantry and Breakfast Table Service Garde Manger Co-op/Internship/Externship/Practicum Locally Determined Courses	2 3 2 2 3 3 3 3 6
HOTEL & RESTAURANT MANAGEMENT SPECIALTY (28 CREDITS)	ACC 101 CIS 101 BUS 101 BUS 102 BUS 105 HOS 108 HOS 205 ^HOS 280 HRM 202 HRM 206	Principles of Accounting I Introduction to Microcomputers Introduction to Business Business Law Principles of Management Table Service Food and Beverage Cost Control Applications Co-op/Internship/Externship/Practicum Front Office Supervisory Housekeeping	3 3 3 3 3 3 1 3 3

# Hospitality Administration

## Technical Certificate—Casino Management

To earn this degree,  
you must have 34  
credits in the  
following areas:

General Education Core	6
Technical Core	3
Specialty Core	16
Locally Determined Courses	9

### You Must Have

#### Required Courses

Credit  
Hours

##### GENERAL EDUCATION

**ENG 111	English Composition OR	3
**COM 102	Introduction to Interpersonal Communication	3
**MAT 111	Intermediate Algebra OR	3
**MAT 112	Functional Mathematics	3

##### TECHNICAL

HOS 101	Sanitation and First Aid	3
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##### SPECIALTY (25 CREDITS)

HOS 132	Techniques of Casino Games: Blackjack	6
HOS 141	Introduction to Casino Operations	3
HOS 231	Techniques of Casino Games: Craps-Subsequent	7
	Locally Determined Courses	9

**Key** (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capstone Course

# Hospitality Administration

## Technical Certificate—Food Service

To earn this degree,  
you must have 30  
credits in the  
following areas:

General Education Core	6
Technical Core	3
Specialty Core	6
Locally Determined Courses	15

### You Must Have

### Required Courses

**Credit  
Hours**

GENERAL EDUCATION	Required Courses	Credit Hours
	**COM 101 Fundamentals of Public Speaking OR **ENG 111 English Composition SOC 111 Introduction to Sociology	3
TECHNICAL	HOS 101 Sanitation and First Aid	3
SPECIALTY (21 CREDITS)	HOS 102 Basic Foods Theory and Skills HOS 104 Nutrition Locally Determined Courses	3 3 15

**Key** (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capstone Course

# Human Services

## Degrees Available:

- Associate of Applied Science (62 Credits)
- Associate of Science (65 Credits)
- Technical Certificate in Mental Health (30 Credits)

## Specialties Offered:

- Correctional Rehabilitation Services
- Generalist
- Gerontology
- Mental Health
- Substance Abuse

## Program Available at:

Fort Wayne  
Indianapolis  
Madison  
Muncie  
Sellersburg  
Terre Haute

## Program Description

The Human Services program offers students the opportunity to become human services generalists and/or to concentrate in the areas of substance abuse, gerontology, correctional rehabilitation services or mental health.

Human services professionals reach out to individuals, families and communities. The Human Services program provides students with the broad understanding they need to help others meet their psychological, social and environmental needs. The human services generalist may find employment in a variety of settings such as community centers, group homes, substance abuse centers and nursing homes.

Those who study human services with a focus on substance abuse may find positions in substance abuse centers (residential, detoxification and hospitals) as counselors or residents-in-training. Those who focus on gerontology may find jobs in adult day care centers, senior citizens centers and extended care facilities.

Program objectives include training the entry-level worker, providing education and training to upgrade the skills and knowledge of those currently employed, and providing development and enhancement. Throughout the program students examine their values and attitudes which reflect upon their interactions with others.

The associate of applied science degree requires 62 credits. Human Services students wishing to pursue a Bachelor's of Arts or Bachelor's of Science degree in Community Health at Indiana State University or in Social Work at Ball State University and enter as a junior-year student may complete an Associate of Science degree in Human Services. Students completing an associate of science program will also be able to enter the workforce, as well as to transfer to ISU or BSU. The availability of degrees and specialties will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Human Services program participate in evaluations of proficiency in general and technical education.

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Human Services

## Associate of Applied Science

To earn this degree,  
you must have 62  
credits in the  
following areas:

General Education Core	18
Technical Core	29
Specialty Core	12
Locally Determined Courses	3

### You Must Have

#### GENERAL EDUCATION

Required Courses		Credit Hours
**BIO 101	Introductory Biology OR	3
**SCI 111	Physical Science	3
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
**MAT 111	Intermediate Algebra OR	3
**MAT 112	Functional Mathematics	3
POL 101	Introduction to American Government and Politics	3
**PSY 101	Introduction to Psychology OR	3
**SOC 111	Introduction to Sociology	3

#### TECHNICAL

	HMS 101	Introduction to Human Services	3
	HMS 102	Helping Relationship Techniques	3
	HMS 103	Interviewing and Assessment	3
	HMS 201	Internship I	4
	^HMS 202	Internship II	4
	HMS 203	Internship Seminar I	3
	HMS 204	Internship Seminar II	3
	HMS 205	Behavioral/Reality Techniques	3
	HMS 206	Group Process and Skills	3

### Choose One of the Following Specialties

#### CORRECTIONAL REHABILITATION SERVICES

#### SPECIALTY (15 CREDITS)

	HMS 105	Introduction to Correctional Rehabilitation Services	3
	HMS 113	Problems of Substance Abuse in Society OR	3
	HMS 215	Juvenile Delinquency	3
	HMS 240	Rehabilitation Process: Probation and Parole	3
	PSY 201	Lifespan Development OR	3
	PSY 205	Abnormal Psychology Locally Determined Courses	3

Specialties Continued Next Page

# Human Services

## Associate of Applied Science—Specialties

	Required Courses	Credit Hours
GENERALIST SPECIALTY (15 CREDITS)	CIS 101 Introduction to Microcomputers PSY 201 Lifespan Development *HMS Human Services Elective *HMS Human Services Elective Locally Determined Courses	3 3 3 3 3
GERONTOLOGY SPECIALTY (15 CREDITS) (CHOOSE 15 CREDITS)	CIS 101 Introduction to Microcomputers HMS 108 Psychology of Aging HMS 114 Social Services in Long-Term Care HMS 120 Health and Aging HMS 124 Activity Director Basic HMS 130 Social Aspects of Aging HMS 140 Loss and Grief Locally Determined Courses	3 3 3 3 6 3 3 3
MENTAL HEALTH SPECIALTY (15 CREDITS)	HMS 104 Crisis Intervention HMS 113 Problems of Substance Abuse in Society OR HMS 140 Loss and Grief OR HMS 220 Issues and Ethics in Human Services PSY 201 Lifespan Development PSY 205 Abnormal Psychology Locally Determined Courses	3 3 3 3 3 3 3 3
SUBSTANCE ABUSE SPECIALTY (15 CREDITS)	HMS 113 Problems of Substance Abuse in Society HMS 208 Treatment Models of Substance Abuse HMS 209 Counseling Issues HMS 210 Codependency OR PSY 205 Abnormal Psychology Locally Determined Courses	3 3 3 3 3 3

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Human Services

## Associate of Science

To earn this degree,  
you must have 65  
credits in the  
following areas:

General Education Core	27
Technical Core	38
Specialty Core	N/A
Locally Determined Courses	N/A



Curriculum designed for  
transfer to Ball State  
University's Bachelor in  
Social Work

### You Must Have

#### GENERAL EDUCATION

Required Courses	Credit Hours	
BIO 101	Introductory Biology	3
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
MAT 112	Functional Mathematics	3
POL 101	Introduction to American Government and Politics	3
PSY 101	Introduction to Psychology	3
SOC 111	Introduction to Sociology	3
PSY 201	Lifespan Development	3
PSY 205	Abnormal Psychology	3

#### TECHNICAL

CIS 101	Introduction to Microcomputers	3
HMS 101	Introduction to Human Services	3
HMS 102	Helping Relationship Techniques	3
HMS 103	Interviewing and Assessment	3
HMS 113	Problems of Substance Abuse	3
HMS 201	Internship I	4
^HMS 202	Internship II	4
HMS 203	Internship Seminar I	3
HMS 204	Internship Seminar II	3
HMS 205	Behavioral/Reality Techniques	3
HMS 206	Group Process and Skills	3
HMS 220	Issues and Ethics in Human Services	3

# Human Services

## Associate of Science

To earn this degree,  
you must have 65  
credits in the  
following areas:

General Education Core	27
Technical Core	38
Specialty Core	N/A
Locally Determined Courses	N/A



Curriculum designed for  
transfer to Indiana State  
University's BA or BS in  
Community Health.

### You Must Have

	Required Courses	Credit Hours
GENERAL EDUCATION		
BIO 101	Introductory Biology	3
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion	3
	OR	
ENG 211	Technical Writing	3
MAT 111	Intermediate Algebra	3
	OR	
MAT 112	Functional Mathematics	3
POL 101	Introduction to American Government and Politics	3
PSY 101	Introduction to Psychology	3
SOC 111	Introduction to Sociology	3
TECHNICAL		
CIS 101	Introduction to Microcomputers	3
HMS 101	Introduction to Human Services	3
HMS 102	Helping Relationship Techniques	3
HMS 103	Interviewing and Assessment	3
HMS 104	Crisis Intervention	3
HMS 201	Internship I	4
<sup>^</sup> HMS 202	Internship II	4
HMS 203	Internship Seminar I	3
HMS 204	Internship Seminar II	3
HMS 205	Behavioral/Reality Techniques	3
HMS 206	Group Process and Skills	3
HMS 207	Program Planning/Policy Issues	3

# Human Services

## Technical Certificate—Mental Health

To earn this degree,  
you must have 30  
credits in the  
following areas:

General Education Core	6
Technical Core	3
Other Required Courses	6
Locally Determined Courses	15

### You Must Have

### Required Courses

### Credit

GENERAL EDUCATION	COM 102 PSY 101	Introduction to Interpersonal Communication Introduction to Psychology	3 3
TECHNICAL	HMS 101	Introduction to Human Services	3
OTHER REQUIRED COURSES (21 CREDITS)	HMS 205 PSY 205	Behavioral/Reality Techniques Abnormal Psychology Locally Determined Courses	3 3 15

# Paralegal

## Program Description

Recognizing the demand for trained paralegals, Ivy Tech has shaped a curriculum with input from attorneys and other professionals associated with the legal field. These advisors offer Ivy Tech the opportunity to establish the qualifications necessary for success in the paralegal field.

The duties of trained paralegals can range from research and writing to interviewing and investigations. For example, paralegals can be found performing legal research, drafting legal correspondence and legal pleadings, interviewing clients and witnesses, or managing trial documents and exhibits.

An Ivy Tech education provides students with the wide variety of skills necessary to succeed in this career. The curriculum emphasizes written and oral communication skills and provides in-class opportunities for technical skill development. Courses are taught by attorneys who are selected based upon their experience in the subject matter, as well as their familiarity with the function of paralegals as part of the legal team.

A two-year program requiring 60 credits leads to an associate of applied science degree. A 63-credit Associate of Science degree will transfer to Ball State University. Students graduating from the Paralegal program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- *Associate of Applied Science (60 Credits)*
- *Associate of Science (63 Credits)*

### Specialties Offered:

*None*

### Program Available at:

*Fort Wayne  
Indianapolis  
Muncie  
Valparaiso*

# Paralegal

## Associate of Applied Science

To earn this degree,  
you must have 60  
credits in the  
following areas:

General Education Core	18
Technical Core	21
Specialty Core	N/A
Locally Determined Courses	21

### You Must Have

	Required Courses	Credit Hours
GENERAL EDUCATION	**ANP 101 Anatomy and Physiology I OR **BIO 101 Introductory Biology OR **SCI 111 Physical Science COM 101 Fundamentals of Public Speaking ENG 111 English Composition ENG 112 Exposition and Persuasion MAT 111 Intermediate Algebra * Humanities/Social Sciences Elective	3 3 3 3 3 3 3 3 3 3
TECHNICAL CORE	**ACC 101 Principles of Accounting I OR **CIS 101 Introduction to Microcomputers LEG 101 Introduction to Paralegal Studies LEG 102 Legal Research and Writing LEG 103 Civil Procedures LEG 106 Torts and Claims Investigation LEG 202 Advanced Trial Procedures ^LEG 204 Advanced Legal Writing	3 3 3 3 3 3 3 3
LOCALLY DETERMINED COURSES (21 CREDITS)	ACC 105 Income Tax I BUS 101 Introduction to Business BUS 102 Business Law LEG 104 Torts LEG 105 Business Associations LEG 107 Contracts and Commercial Law LEG 108 Property Law LEG 203 Law Office Management and Technology LEG 209 Family Law LEG 210 Wills, Trusts and Probate LEG 211 Criminal Law LEG 212 Bankruptcy Law LEG 280 Co-op/Internship LEG 281-294 Special Topics in Paralegal	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 1-5
CHOOSE FROM THIS LIST OF COURSES		

# Paralegal

## Associate of Science

To earn this degree,  
you must have 63  
credits in the  
following areas:

General Education Core	30
Technical Core	21
Specialty Core	N/A
Electives	12



Curriculum designed to  
transfer to Ball State  
University's BS in Legal  
Assistance Studies.

### You Must Have

#### GENERAL EDUCATION

Required Courses		Credit Hours
BIO 101	Introductory Biology	3
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion	3
HSY 101	Survey of American History I OR	3
HSY 102	Survey of American History II	3
MAT 111	Intermediate Algebra	3
PHL 101	Introduction to Philosophy	3
PHL 102	Introduction to Ethics	3
POL 101	Introduction to American Govt. and Politics	3
PSY 101	Introduction to Psychology OR	3
SOC 111	Introduction to Sociology	3

#### TECHNICAL CORE

ACC 101	Principles of Accounting I	3
LEG 101	Introduction to Paralegal Studies	3
LEG 102	Legal Research and Writing	3
LEG 103	Civil Procedures	3
LEG 106	Torts and Claims Investigation	3
LEG 202	Advanced Trial Procedures	3
^LEG 204	Advanced Legal Writing	3

ELECTIVES  
(12 CREDITS)  
CHOOSE FROM THIS  
LIST OF COURSES

BUS 101	Introduction to Business	3
BUS 102	Business Law	3
CIS 101	Introduction to Microcomputers	3
LEG 104	Torts	3
LEG 105	Business Associations	3
LEG 107	Contracts and Commercial Law	3
LEG 108	Property Law	3
LEG 203	Law Office Management and Technology	3
LEG 209	Family Law	3
LEG 210	Wills, Trusts and Probate	3
LEG 211	Criminal Law	3
LEG 212	Bankruptcy Law	3
LEG 280	Co-op/Internship	3
LEG 281-294	Special Topics in Paralegal	1-5

# Public Safety

## Program Description

The Public Safety program is designed to meet the ongoing needs of municipalities, students, businesses and industries. The program develops technical skills, general knowledge, critical thinking and problem solving abilities of students. Broad-based technical skills and critical thinking processes assist students in adapting to changes in the work environment and promoting successful advancement on the job.

Specialty areas allow students to choose an emphasis in environmental care, fire science, hazardous materials or public administration. Associate of applied science degrees require 60-63 credits. Technical certificates and career development certificates are available. The availability of associate of applied science specialties and technical certificates will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Public Safety program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- Associate of Applied Science (60-63 Credits)
- Technical Certificate (30 Credits)

### Specialties Offered:

- Environmental Care
- Fire Science
- Hazardous Materials
- Public Administration

### Program Available at:

*Fort Wayne  
Gary  
Indianapolis  
Terre Haute*

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Public Safety

## Associate of Applied Science

To earn this degree,  
you must have  
60-63 credits in the  
following areas:

General Education Core	18
Technical Core	15
Specialty Core	12-15
Locally Determined Courses	12-15

### You Must Have

#### Required Courses

Credit  
Hours

##### GENERAL EDUCATION

**CHM 101	Chemistry I OR	3
**SCI 111	Physical Science	3
**COM 101	Fundamentals of Public Speaking OR	3
**COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
MAT 111	Intermediate Algebra	3
POL 101	Introduction to American Government and Politics	3
**	General Education Course	3

##### TECHNICAL

PST 121	Risk Management	3
PST 220	Incident Management Systems	3
PST 221	Computer Design and Planning	3
TEC 104	Computer Fundamentals for Technology	3
TEC 106	Hazardous Materials and Control	3

### Choose One of the following Specialties

##### ENVIRONMENTAL CARE SPECIALTY (27 CREDITS)

ENV 101	Introduction to Environmental Technology	3
ENV 102	Environmental Management	3
ENV 103	Environmental Chemistry	3
HMT 104	Environmental Toxicology	3
HMT 200	Environmental Protection Agency (EPA) Regulations Locally Determined Courses	3
		12

**Specialties Continued Next Page**

**Key** (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capstone Course

# Public Safety

## Associate of Applied Science—Specialties

FIRE SCIENCE SPECIALTY (30 CREDITS)	AFS 102	Fire Apparatus and Equipment	3
	AFS 103	Firefighting Strategy and Tactics	3
	AFS 201	Fire Protection Systems	3
	^AFS 202	Fire Service Management	3
	AFS 204	Fire Service Hydraulics	3
		Locally Determined Courses	15
HAZARDOUS MATERIALS SPECIALTY (27 CREDITS)	HMT 100	Occupational Safety and Health (OSHA) Regulations	3
	HMT 120	Hazard Communication Standard	3
	HMT 200	Environmental Protection Agency (EPA) Regulations	3
	HMT 220	Hazardous Materials Recovery, Incineration, and Disposal	3
		Locally Determined Courses	15
PUBLIC ADMINISTRATION SPECIALTY (27 CREDITS)	BUS 105	Principles of Management	3
	BUS 208	Organizational Behavior	3
	OPM 102	Techniques of Supervision I	3
	OPM 224	Operations Management	3
		Locally Determined Courses	15

# Public Safety

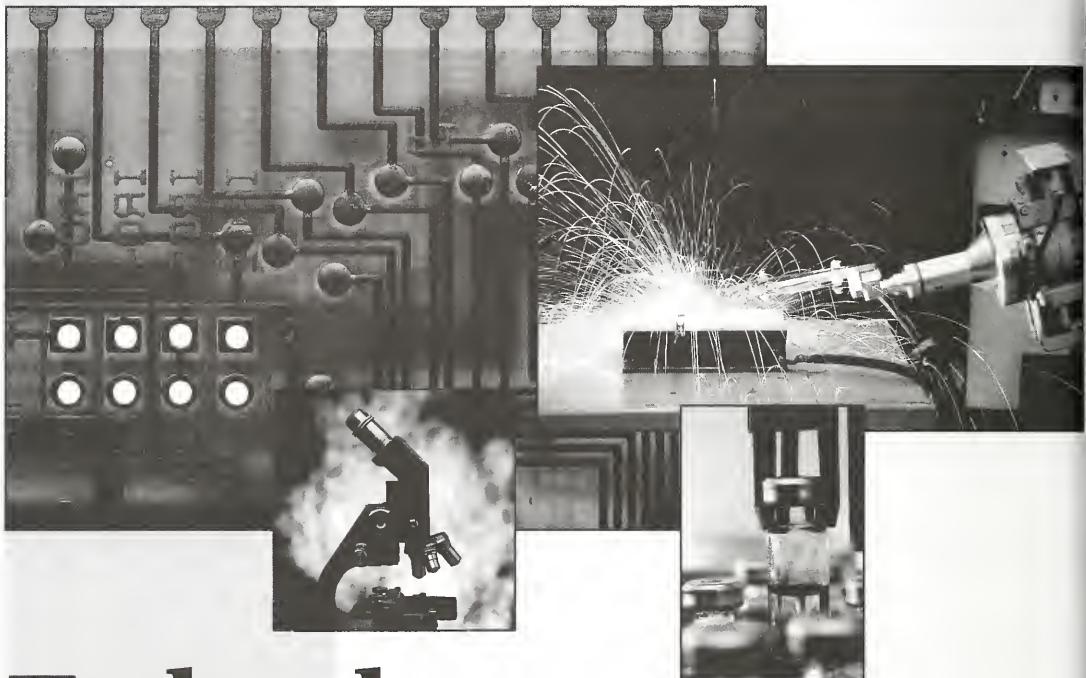
## Technical Certificate—Fire Science

To earn this degree,  
you must have  
30 credits in the  
following areas:

General Education Core	6
Technical Core	3
Specialty Core	6
Locally Determined Courses	15

### Credit Hours

Required Courses		GENERAL EDUCATION	TECHNICAL	OTHER REQUIRED COURSES (21 CREDITS)
ENG 111	English Composition	3		
POL 101	Introduction to American Government and Politics	3		
TEC 104	Computer Fundamentals for Technology	3		
AFS 103	Strategy and Tactics			3
AFS 201	Fire Protection Systems			3
	Regionally Determined Courses			15



# Technology

The Technology Division provides broad, practical education for those seeking employment and advancement in craft and technical occupations and for those seeking further education. The programs emphasize the ability to think and plan in the job setting and to address technical problems. Initial laboratory experiences develop skills in the use of modern industrial equipment and measuring instruments. Later classroom and laboratory work provide training in industrial applications of theory, analysis, design and construction techniques. Each program provides opportunities for the student to advance from basic skills to proficiency on a high technological level.



Program advisory committees, composed of experts in each area of industry, serve the important function of keeping the content of the programs current with the needs of industries to assure graduates of employability in today's labor market. The practical value of the coursework is substantiated by its use in the training programs of many local industries. Each program is administered and taught by faculty who have industrial/technical/professional experience and who are dedicated to technical education. The student is advised to contact the nearest Ivy Tech center for information concerning programs and course offerings.

# Automotive Technology

## Program Description

The Automotive Technology Program prepares students with the general and technical education needed for successful careers in automotive service, sales, technical support, management and customer relations, and for continuation in higher education. A student in the Automotive Technology program may specialize in automotive body repair or automotive service.

A two-year program requiring 63-66 credits leads to an associate of applied science degree. Automotive Technology students wishing to pursue a bachelor's of science in Industrial Automotive Technology at Indiana State University and enter as a junior-year student may complete the associate of science degree program (pending authorization) in Automotive Technology. Students completing the associate of science program will also be able to enter the workforce, as well as to transfer to ISU.

Technical and career development certificates also are available. The availability of specialties and degrees will vary from campus to campus. Interested students should contact the local Ivy Tech campus. Students graduating from the Automotive Technology program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- Associate of Applied Science (63-66 Credits)
- Associate of Science (64 Credits)
- Technical Certificate (39 Credits)

### Specialties Offered:

- Automotive Body Repair
- Automotive Service

### Program Available at:

Columbus  
East Chicago  
Evansville  
Fort Wayne  
Indianapolis  
Kokomo  
Lafayette  
Muncie  
Richmond  
Sellersburg  
South Bend  
Terre Haute  
Valparaiso

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Automotive Technology

## Associate of Applied Science

To earn this degree,  
you must have 63-  
66 credits in the  
following areas:

General Education Core	18
Technical Core	12
Specialty Core	33-36
Locally Determined Courses	NA

### You Must Have

#### GENERAL EDUCATION

**COM	Communications Elective	3
ENG 111	English Composition	3
MAT 112	Functional Mathematics	3
SCI 111	Physical Science	3
*	General Education Elective	3
*	Humanities/Social Sciences Elective	3

#### TECHNICAL

AMV 101	Chassis and Suspension Principles	3
AMV 113	Electricity for Transportation	3
AMV 202	Computer Engine Controls	3
AST 201	Heating and Air Conditioning Principles	3

### Choose One of the Following Specialties

#### AUTOMOTIVE BODY REPAIR

##### SPECIALTY (33 CREDITS)

ABR 101	Body Repair Fundamentals	3
ABR 103	Auto Paint Fundamentals	3
^ABR 104	Collision Damage Analysis and Repair	3
ABR 105	Conventional Frame Analysis and Diagnosis	3
ABR 106	Body Repair Applications	3
ABR 107	Auto Painting Technology	3
ABR 108	Unibody Structural Analysis and Repair	3
ABR 109	Collision Damage Appraising	3
ABR 120	Fiberglass Plastic Repair	3
AMV 107	Engine Principles and Design	3
IDS 114	Introduction to Welding	3

#### AUTOMOTIVE SERVICE

##### SPECIALTY (36 CREDITS)

AMV 107	Engine Principles and Design	3
AST 105	Fuel Systems	3
AST 108	Electrical Accessory Systems	3
AST 203	Engine Rebuild	3
AST 204	Automatic Transmission/Transaxle	3
AST 205	Manual Transmission/Transaxle	3
AST 207	Engine Performance	3
AST 209	Automotive Braking Systems	3
AST 220	Transaxle and Driveline Service	3
AST 221	Driveability Diagnosis	3
^AST 225	Advanced Electronics	3
AST 280	Co-op/Internship	3

# Automotive Technology

## Associate of Science <sup>‡</sup>

To earn this degree,  
you must have 64  
credits in the  
following areas:

General Education Core	28
Technical Core	36
Specialty Core	N/A
Locally Determined Courses	N/A



Curriculum designed for transfer  
to Indiana State University's BS in  
Automotive Technology program

### You Must Have

### Required Courses

Credit  
Hours

#### GENERAL EDUCATION

CHM 101	Chemistry I	3
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion OR	3
ENG 211	Technical Writing	3
MAT 111	Intermediate Algebra OR	3
MAT 112	Functional Mathematics	3
MAT 121	Geometry-Trigonometry	3
PHY 101	Physics I	4
***	Social Sciences Electives	6

#### TECHNICAL

AMV 101	Chassis and Suspension Principles	3
AMV 107	Engine Principles and Design	3
AST 105	Fuel Systems OR	3
AMV 113	Electricity for Transportation	3
AMV 202	Computer Engine Controls	3
AST 104	Start and Charge Systems	3
AST 106	Electronic Ignition Systems	3
AST 201	Heating and Air Conditioning Principles OR	3
AST 209	Automotive Braking Systems	3
AST 204	Auto Transmission/Transaxle OR	3
AST 208	Differentials/Drivelines	3
AST 207	Engine Performance	3
AST 220	Transaxle and Driveline Service	3
IDS 104	Fluid Power Basics	3
TEC 104	Computer Fundamentals for Technology	3

<sup>‡</sup> Pending authorization.

\*\*\* Electives from courses that transfer to ISU.

Key (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Automotive Technology

## Technical Certificate

To earn this degree,  
you must have 39  
credits in the  
following areas:

General Education Core	6
Technical Core	3
Specialty Core	6-30
Locally Determined Courses	0-24

You Must Have	Required Courses	Credit Hours	
GENERAL EDUCATION	COM 102 **	Introduction to Interpersonal Communication General Education Course	3
TECHNICAL	AMV 101	Chassis and Suspension Principles	3

### Choose One of the Following Specialties

AUTOMOTIVE BODY REPAIR SPECIALTY (30 CREDITS)	ABR 101 ABR 103 ^ABR 104 ABR 105 ABR 106 ABR 107 ABR 108 ABR 109 ABR 120 IDS 114	Body Repair Fundamentals Auto Paint Fundamentals Collision Damage Analysis and Repair Conventional Frame Analysis and Diagnosis Body Repair Applications Automotive Painting Technology Unibody Structural Analysis and Repair Collision Damage Appraising Fiberglass Plastic Repair Introduction to Welding	3 3 3 3 3 3 3 3 3 3
AUTOMOTIVE SERVICE SPECIALTY (30 CREDITS)	AMV 113 AST 209	Electricity for Transportation Automotive Braking Systems Locally Determined Courses	3 3 24

#### Key (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capstone Course

# Aviation Technology

## Program Description

The Aviation Technology program prepares students to become certified Aviation Technicians with ratings for Aircraft Maintenance or Avionics. The course of instruction introduces control methods, team building, technical writing and computer skills. Opportunities exist for employment with commercial air carriers and private maintenance operations.

Completion of the two-year program, consisting of 61 or 96 credit hours, will lead to an associate degree. Students graduating from the Aviation Technology program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- Associate of Applied Science (61 or 96 Credits)

### Specialties Offered:

- Aircraft Maintenance Technician
- Avionics

### Program Available at:

*Terre Haute*

# Aviation Technology

## Associate of Applied Science

To earn this degree,  
you must have 61 or  
96 credits in the  
following areas:

General Education Core	19
Technical Core	17
Specialty Core	25 or 60
Locally Determined Courses	N/A

### You Must Have

#### GENERAL EDUCATION

Required Courses	Credit Hours
ENG 111 English Composition	3
ENG 211 Technical Writing	3
MAT 111 Intermediate Algebra	3
MAT 131 Algebra/Trigonometry 1	3
PHY 101 Physics I	4
PSY 101 Introduction to Psychology	3

#### TECHNICAL

AVT 141 Aviation Basics I	3
AVT 142 Aviation Basics II	3
AVT 144 Aircraft Electricity	4
AVT 145 Aircraft Ground Servicing	2
AVT 146 Aviation Regulations	2
AVT 148 Aviation Materials and Processes	3

### Choose One of the Following Specialties

#### AIRCRAFT MAINTENANCE

AVT 222 Nonmetallic Structures	2
AVT 223 Aircraft Finishes	2
AVT 224 Aircraft Inspection	4
AVT 225 Airframe Fluid Systems	4
AVT 226 Airframe Electrical Systems	4
AVT 227 Aircraft Sheetmetal	6
AVT 228 Aircraft Instruments and Avionics	3
AVT 231 Reciprocating Powerplants	5
AVT 232 Turbine Powerplants	5
AVT 233 Powerplant Fuel and Induction Systems	5
AVT 234 Reciprocating Engine Ignition and Fuel Systems	2
AVT 235 Powerplant Fluid and Indicating Systems	3
AVT 236 Turbine Starting Systems and Auxiliary Power	2
AVT 237 Propellers	4
AVT 238 Turbine Systems and Components	4
^AVT 240 Structural Repair and Inspection	5

#### AVIONICS SPECIALTY (25 CREDITS)

AVT 151 Introduction to Avionics	3
AVT 205 Navigation and Communications Systems	3
AVT 206 Aviation Control Circuits	3
AVT 257 Aircraft Microprocessors	2
^AVT 260 Avionics Installation	5
CIS 101 Introduction to Microcomputers	3
OR	
TEC 104 Computer Fundamentals for Technology	3
ELT 124 Digital I	3
ELT 125 Digital II	3

# Avionics

## Program Description

The Avionics Technical Certificate program prepares graduates to maintain modern aircraft avionic systems. These aircraft systems fall under the categories of power generation, communications and radar, and navigation and flight control. Basic courses emphasize an understanding of electrical, electronic and computer fundamentals. Advanced courses apply these fundamentals to the operation of the aircraft systems. Students graduating from the Avionics Technology program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- *Technical Certificate (38 Credits)*

### Specialties Offered:

*None*

### Program Available at:

*Terre Haute*

## Technical Certificate

To earn this degree,  
you must have 38  
credits in the  
following areas:

General Education Core	9
Technical Core	29
Specialty Core	N/A
Locally Determined Courses	N/A

### You Must Have

### Required Courses

### Credit Hours

GENERAL EDUCATION	ENG 111	English Composition	3
	ENG 211	Technical Writing	3
	MAT 111	Intermediate Algebra	3
TECHNICAL	AVT 144	Aircraft Electricity	4
	AVT 151	Introduction to Avionics	3
	AVT 205	Navigation and Communications Systems	3
	AVT 206	Aviation Control Circuits	3
	AVT 257	Aircraft Microprocessors	2
	AVT 260	Avionics Installation	5
	CIS 101 OR TEC 104	Introduction to Microcomputers Computer Fundamentals for Technology	3
	ELT 124	Digital I	3
	XXX XXX	Electronics Course or Computer Course Elective	3

# Construction Technology

## Program Description

The Construction Technology program educates technicians with broad-based skills in construction methods, estimation and specification, and blueprint interpretation. Students may choose a specialty area to build on the foundation skills. Specialized courses are offered in architectural design, residential and light carpentry, landscape technology, cabinetry, surveying, and heating, ventilation and air conditioning. The flexibility of the program allows students to pursue a full course of study or take courses as needed to update skills.

Associate of applied science degrees require 61 to 64 credits. Specialties are available in architecture, cabinetry, heating, ventilation and air conditioning, landscape technology, residential and light carpentry and surveying. Technical and career development certificates also are available. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Construction Technology program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- *Associate of Applied Science (61-64 Credits)*
- *Technical Certificate (30-39 Credits)*

### Specialties Offered:

- *Architectural*
- *Cabinetry*
- *Heating, Ventilation, and Air Conditioning*
- *Landscape Technology*
- *Residential and Light Carpentry*
- *Surveying*

### Program Available at:

*East Chicago  
Fort Wayne  
Kokomo  
Muncie  
Richmond*

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Construction Technology

## Associate of Applied Science

To earn this degree,  
you must have  
61-64 credits in the  
following areas:

General Education Core	19
Technical Core	18
Specialty Core	12-15
Locally Determined Courses	9-15

### You Must Have

#### GENERAL EDUCATION

	Required Courses	Credit Hours
**COM	Communications Course	3
ENG 111	English Composition	3
MAT 111	Intermediate Algebra	3
MAT 121	Geometry/Trigonometry	3
PHY 100	Technical Physics	4
*	Humanities/Social Sciences Elective	3

#### TECHNICAL

CON 101	Introduction to Construction Technology	3
CON 106	Construction Blueprint Reading	3
^CON 204	Estimating and Specifications	3
TEC 102	Technical Graphics	3
TEC 104	Computer Fundamentals for Technology	3
TEC 113	Basic Electricity	3

### Choose One of the following Specialties

#### ARCHITECTURAL SPECIALTY (24 CREDITS)

DCT 105	Facilities Design and Layout	3
DCT 109	Construction Materials and Specifications	3
DCT 204	Architectural CAD	3
DCT 208	Structural Detailing	3
DSN 103	CAD Fundamentals	3
	Locally Determined Courses	9

#### CABINETRY SPECIALTY (24 CREDITS)

BCT 107	Furniture Design and Construction	3
BCT 108	Cabinetry Fabrication Techniques	3
BCT 111	Woodworking Fundamentals	3
BCT 113	Cabinetry/Furniture Door and Drawer Assembly	3
	Locally Determined Courses	12

#### HEATING, VENTILATION, AND AIR CONDITIONING SPECIALTY (27 CREDITS)

HEA 101	Heating Fundamentals	3
HEA 103	Refrigeration I	3
HEA 104	Heating Service	3
HEA 106	Refrigeration II	3
HEA 202	Electrical Circuits and Controls	3
	Locally Determined Courses	12

**Specialties Continued Next Page**

# Construction Technology

## Associate of Applied Science—Specialties

		Required Courses	Credit Hours
LANDSCAPE TECHNOLOGY SPECIALTY (27 CREDITS)	LND 101	Landscape Trees	3
	LND 102	Shrubs and Other Plants	3
	LND 103	Landscape Management I	3
	LND 104	Turf Management I	3
	LND 105	Botany	3
	LND 203	Insects Pests of Ornamentals	3
	LND 207	Soils	3
Locally Determined Courses			6
RESIDENTIAL AND LIGHT CARPENTRY SPECIALTY (24 CREDITS)	BCT 104	Floor and Wall Layout and Construction	3
	BCT 105	Roof Construction	3
	BCT 114	Exterior Trim	3
	BCT 221	Interior Trim	3
	Locally Determined Courses		
SURVEYING SPECIALTY (24 CREDITS)	DCT 210	Surveying I	3
	DCT 213	CAD Mapping	3
	DSN 103	CAD Fundamentals	3
	DSN 106	Descriptive Geometry	3
	Locally Determined Courses		

## Technical Certificate

To earn this degree,  
you must have  
30-39 credits in the  
following areas:

General Education Core	6
Technical Core	3
Specialty Core	6
Locally Determined Courses	15-24

### You Must Have

GENERAL EDUCATION

TECHNICAL  
Choose One Specialty

HEATING, VENTILATION,  
AND AIR CONDITIONING  
SPECIALTY (30 CREDITS)

LANDSCAPE TECHNOLOGY  
SPECIALTY (30 CREDITS)

RESIDENTIAL AND LIGHT  
CARPENTRY SPECIALTY  
(21 CREDITS)

		Required Courses	Credit Hours
**COM 102	Introduction to Interpersonal Communication OR **ENG 111	English Composition Math/Social Sciences/Humanities/Life/Physical Sciences Elective	3 3 3
*	CON 101	Introduction to Construction Technology	3
HEA 101	Heating Fundamentals	3	
HEA 103	Refrigeration I	3	
	Locally Determined Courses	24	
LND 101	Landscape Trees	3	
LND 102	Shrubs and Other Plants	3	
LND 103	Landscape Management I	3	
	Locally Determined Courses	21	
BCT 104	Floor and Wall Layout and Construction	3	
BCT 105	Roof Construction	3	
	Locally Determined Courses	15	

# Design Technology

## Degrees Available:

- Associate of Applied Science (64 Credits)
- Associate of Science (64 Credits)
- Technical Certificate (33 Credits)

## Specialties Offered:

- Architecture
- Civil
- CADD-M
- Computer Graphics
- Heating, Ventilation, and Air Conditioning
- Mechanical

## Program Available at:

Bloomington  
Columbus  
East Chicago  
Elkhart  
Evansville  
Fort Wayne  
Gary  
Indianapolis  
Kokomo  
Lafayette  
Muncie  
Sellersburg  
South Bend  
Terre Haute  
Valparaiso

## Program Description

The Design Technology program is competency-based and is designed to be responsive to the needs of business and industry. The program provides an environment conducive to the development of general knowledge, technical skills and critical thinking skills, so graduates may enter their profession as entry-level technicians. They also are prepared to respond to future advances and changes in their profession. Graduates have the necessary skills to choose other related and challenging careers or continue their education at other postsecondary institutions.

Associate of applied science degrees require 64 credits. Specialties include architecture, civil, computer-aided drafting design and manufacturing, heating, ventilation and air conditioning, mechanical and computer graphics.

Design students wishing to pursue a bachelor of science degree in Mechanical Technology at Indiana State University and enter as a junior-year student may complete the associate of science degree program in Design Technology. Students completing the associate of science program will also be able to enter the workforce, as well as to transfer to ISU.

Technical and career development certificates also are available. The Design Technology program is available via distance education for interested students. Contact the nearest Ivy Tech campus for information and to enroll. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Design Technology program participate in evaluations of proficiency in general and technical education.

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Design Technology

## Associate of Applied Science

To earn this degree,  
you must have 64  
credits in the  
following areas:

General Education Core	19
Technical Core	18
Specialty Core	12
Locally Determined Courses	15

### You Must Have

### Required Courses

### Credit Hours

#### GENERAL EDUCATION

COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
*MAT 111	Intermediate Algebra AND MAT 121      Geometry/Trigonometry OR *MAT 131      Algebra/Trigonometry I AND MAT 132      Algebra/Trigonometry II OR *MAT 133      College Algebra AND MAT 134      Trigonometry	3
PHY 101	Physics I	4
*	Humanities/Social Sciences Elective	3

#### TECHNICAL

DSN 103	CAD Fundamentals	3
DSN 106	Descriptive Geometry	3
DSN 220	Advanced CAD	3
^DSN 221	Statics	3
TEC 102	Technical Graphics	3
TEC 104	Computer Fundamentals for Technology	3

### Choose One of the Following Specialties

#### ARCHITECTURE SPECIALTY (27 CREDITS)

DCT 105	Facilities Design and Layout	3
DCT 109	Construction Materials and Specifications	3
DCT 204	Architectural CAD	3
DCT 208	Structural Detailing	3
	Locally Determined Courses	15

Specialties Continued Next Page

# Design Technology

## Associate of Applied Science—Specialties

		Required Courses	Credit Hours
CIVIL SPECIALTY (27 CREDITS)	DCT 109 DCT 208 DCT 210 DCT 213	Construction Materials and Specifications Structural Detailing Surveying I CAD Mapping Locally Determined Courses	3 3 3 3 15
COMPUTER-AIDED DRAFTING DESIGN AND MANUFACTURING SPECIALTY (27 CREDITS)	MITT 208 MTT 220 MTT 221 TEC 101	CNC Programming I CAD/CAM I CAD/CAM II Manufacturing Processes Locally Determined Courses	3 3 3 3 15
COMPUTER GRAPHICS SPECIALTY (27 CREDITS)	ART 111 ART 114 VIS 101 VIS 115	Drawing for Visualization Graphic Design Fundamentals of Design Introduction to Computer Graphics Locally Determined Courses	3 3 3 3 15
HEATING, VENTILATION, AND AIR CONDITIONING DESIGN SPECIALTY (27 CREDITS)	HEA 207 HEA 214 HEA 220 HEA 222	HVAC Codes Applied Design Air Distribution Systems Environmental Control Systems Locally Determined Courses	3 3 3 3 15
MECHANICAL SPECIALTY (27 CREDITS)	DCT 104 DCT 214 DCT 217 TEC 101	Product Drafting Machine Design Product Design Manufacturing Processes Locally Determined Courses	3 3 3 3 15

**Key** (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capstone Course

# Design Technology

## Associate of Science

To earn this degree,  
you must have 64  
credits in the  
following areas:

General Education Core	28
Technical Core	27
Specialty Core	9
Locally Determined Courses	N/A



Curriculum designed for transfer  
to Indiana State University's BS in  
Mechanical Technology program

### You Must Have

#### GENERAL EDUCATION

	Required Courses	Credit Hours
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion	3
	OR	
ENG 211	Technical Writing	3
MAT 131	Algebra/Trigonometry I	3
MAT 132	Algebra/Trigonometry II	3
PHY 101	Physics I	4
***	Humanities/Social Sciences Electives	9

#### TECHNICAL

DCT 202	CAD Programming Language	3
DSN 103	CAD Fundamentals	3
DSN 106	Descriptive Geometry	3
DSN 220	Advanced CAD	3
DSN 221	Statics	3
DSN 222	Strength of Materials	3
IDS 104	Fluid Power Basics	3
TEC 102	Technical Graphics	3
TEC 104	Computer Fundamentals for Technology	3

### Choose One of the Following Specialties

#### ARCHITECTURE SPECIALTY (CHOOSE 9 CREDITS)

DCT 105	Facilities Design and Layout	3
DCT 109	Construction Materials and Specifications	3
DCT 204	Architectural CAD	3
DCT 208	Structural Detailing	3

#### CADD-M SPECIALTY (CHOOSE 9 CREDITS)

MTT 208	CNC Programming I	3
MTT 220	CAD/CAM I	3
MTT 221	CAD/CAM II	3
TEC 101	Manufacturing Processes	3

#### MECHANICAL SPECIALTY (CHOOSE 9 CREDITS)

DCT 104	Product Drafting	3
DCT 202	CAD Programming Language	3
DCT 217	Product Design	3
TEC 101	Manufacturing Processes	3

\*\*\* Electives from courses that transfer to Indiana State.

# Design Technology

## Technical Certificate

To earn this degree,  
you must have 33  
credits in the  
following areas:

General Education Core	6
Technical Core	9
Specialty Core	N/A
Locally Determined Courses	18

### You Must Have

#### GENERAL EDUCATION

	Required Courses	Credit Hours
	ENG 111 English Composition ** General Education Course	3

#### TECHNICAL

TEC 102	Technical Graphics	3
TEC 104	Computer Fundamentals for Technology	3
DSN 103	CAD Fundamentals	3

### Choose One of the Following Specialties

Courses required to fulfill specialty areas for the Technical Certificate are determined by the local campuses. The following specialties are available, but you should check with an admissions counselor to ensure that the specialty of interest to you is available at the campus of your choice.

- ARCHITECTURE SPECIALTY (18 CREDITS)
- CIVIL SPECIALTY (18 CREDITS)
- CADD-M SPECIALTY (18 CREDITS)
- HVAC DESIGN SPECIALTY (18 CREDITS)
- MECHANICAL SPECIALTY (18 CREDITS)

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Electronics Technology

## Degrees Available:

- Associate of Applied Sciences (65 Credits)
- Associate of Science (64 Credits)

## Program Description

The Electronics Technology program is designed to meet the ongoing needs of business, industry and the student. The Associate of Applied Science and the Associate of Science degrees are structured to develop the technical skills, general knowledge, and critical thinking and problem solving abilities of graduates. Broad-based technical skills and critical thinking processes assist the student in adapting to changes in the work environment and allow advancement in the field.

Associate of applied science degrees require 65 credits. Specialties include automation controls, biomedical, communications, computer systems/networking, electrical maintenance, electronics, industrial, instrumentation, laser/electro-optics, and telecommunications. Electronics students wishing to pursue a bachelor of science degree in Electronics Technology at Indiana State University and enter as a junior-year student may complete the associate of science degree program in Electronics Technology. Students completing the associate of science program will also be able to enter the workforce, as well as to transfer to ISU. A technical certificate and career development certificates are available. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Electronics program participate in evaluations of proficiency in general and technical education.

## Specialties Offered:

- Automation Controls
- Biomedical
- Communications
- Computer Systems/Networking
- Electrical Maintenance
- Electronics
- Industrial
- Instrumentation
- Laser/Electro-Optics
- Telecommunications

## Program Available at:

Anderson  
Bloomington  
Columbus  
East Chicago  
Elkhart  
Evansville  
Fort Wayne  
Gary  
Indianapolis  
Kokomo  
Lafayette  
Madison  
Marion  
Michigan City  
Muncie  
Richmond  
Sellersburg  
South Bend  
Terre Haute  
Valparaiso

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Electronics Technology

## Associate of Applied Science

To earn this degree,  
you must have 65  
credits in the  
following areas:

General Education Core	19
Technical Core	34
Specialty Core	0-6
Locally Determined Courses	6-12

### You Must Have

#### GENERAL EDUCATION

Required Courses		Credit Hours
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
**MAT 131	Algebra/Trigonometry I AND	3
MAT 132	Algebra/Trigonometry II OR	3
**MAT 133	College Algebra AND	4
MAT 134	Trigonometry	2
PHY 101	Physics 1	4
*	Humanities/Social Sciences Elective	3

#### TECHNICAL

ELT 120	Introduction to Electronics	3
ELT 121	Circuits I	3
ELT 122	Circuits II	3
ELT 124	Digital I	3
ELT 125	Digital II	3
ELT 126	Solid State I	3
ELT 221	Solid State II	3
ELT 222	Microprocessors	3
ELT 224	Linear Integrated Circuit Applications	3
^ELT 234	Advanced Problem Solving	3
TEC 103	Collaborative Team Skills	1
TEC 104	Computer Fundamentals for Technology	3

### Choose One of the following Specialties

#### AUTOMATION CONTROLS

SPECIALTY  
(12 CREDITS)

AMT 102	Introduction to Robotics	3
AMT 201	Manufacturing Systems Control	3
	Locally Determined Courses	6

### Specialties Continued Next Page

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Electronics Technology

## Associate of Applied Science—Specialties

Required Courses			Credit Hours
BIOMEDICAL SPECIALTY (12 CREDITS)	ELT 219 ELT 220	Biomedical Electronics I Biomedical Electronics II Locally Determined Courses	3 3 6
COMMUNICATIONS SPECIALTY (12 CREDITS)	ELT 228 ELT 230	Communications Electronics Advanced Communications Electronics Locally Determined Courses	3 3 6
COMPUTER SYSTEMS/ NETWORKING SPECIALTY (12 CREDITS)	ELT 212 ELT 226	Networking Computer Troubleshooting Locally Determined Courses	3 3 6
ELECTRICAL MAINTENANCE SPECIALTY (12 CREDITS)	ELT 233 ELT 238	Industrial Motors and Controls Process Instrumentation Locally Determined Courses	3 3 6
ELECTRONICS SPECIALTY (12 CREDITS)		Locally Determined Courses	12
INDUSTRIAL SPECIALTY (12 CREDITS)	AMT 201 ELT 223	Manufacturing Systems Control Electrical Machines Locally Determined Courses	3 3 6
INSTRUMENTATION SPECIALTY (12 CREDITS)	ELT 235 ELT 237	Process Control Calibration Locally Determined Courses	3 3 6
LASER/ELECTRO-OPTICS SPECIALTY (12 CREDITS)	ELT 128 ELT 130	Introduction to Lasers Fiber Optics Locally Determined Courses	3 3 6
TELECOMMUNICATIONS SPECIALTY (12 CREDITS)	ELT 130 ELT 229	Fiber Optics Telecommunications Locally Determined Courses	3 3 6

# Electronics Technology

## Associate of Science

To earn this degree,  
you must have 64  
credits in the  
following areas:

General Education Core	31
Technical Core	33
Specialty Core	N/A
Locally Determined Courses	N/A



Curriculum designed for transfer  
to Indiana State University's BS  
in Electronics Technology  
program

### You Must Have

#### Required Courses

Credit  
Hours

##### GENERAL EDUCATION

COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion or Technical Writing	3
ENG 211	Algebra/Trigonometry I	3
MAT 131	Algebra/Trigonometry II	3
MAT 132	Physics I	4
PHY 101	Humanities/Social Sciences Elective	12
***		

##### TECHNICAL

ELT 120	Introduction to Electronics	3
ELT 121	Circuits I	3
ELT 122	Circuits II	3
ELT 124	Digital I	3
ELT 125	Digital II	3
ELT 126	Solid State I	3
ELT 221	Solid State II	3
ELT 222	Microprocessors	3
IDS 104	Fluid Power Basics	3
TEC 102	Technical Graphics	3
TEC 104	Computer Fundamentals for Technology	3

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

\*\*\*Electives from courses that transfer to Indiana State.

# Industrial Technology

## Degrees Available:

- *Associate of Applied Science (61-68 Credits)*
- *Technical Certificate (39 Credits)*

## Program Description

The Industrial Technology program is devoted to the development of skills necessary for the installation, operation and maintenance of industrial equipment and systems. The curriculum is broad-based and offers a number of specialties, but focuses on the integration of each area as used in systemic applications. This requires proficiency in mathematics, communication, physics, and basic computer skills as well as technical subject matter.

In laboratory applications of classroom study each student uses the tools and instruments associated with the practice of the industrial technology specialty including volt-ohm meters, leak detectors, sonic diagnostic tools, pressure and level testing devices, preventive maintenance software programs, welding and brazing equipment, metallurgical testing instruments, hand tools, tool making equipment and electronic and hand precision measuring devices. Safety equipment and the safe use of tools and materials are integrated into each course in the curriculum.

Associate of applied science degrees require 61-68 credits. Specialties are available in heating, ventilation and air conditioning, industrial maintenance, machine tool, mechanical maintenance, tool and die and welding. Technical certificates and career development certificates are available. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Industrial Technology program participate in evaluations of proficiency in general and technical education.

## Specialties Offered:

- *Heating, Ventilation, and Air Conditioning*
- *Industrial Maintenance*
- *Machine Tool*
- *Mechanical Maintenance*
- *Tool and Die*
- *Welding*

## Program Available at:

Anderson  
Bloomington  
Columbus  
Connersville  
East Chicago  
Elkhart  
Evansville  
Fort Wayne  
Gary  
Indianapolis  
Kokomo  
Lafayette  
Lawrenceburg  
Logansport  
Madison  
Muncie  
Richmond  
Sellersburg  
South Bend  
Tell City  
Terre Haute  
Valparaiso

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Industrial Technology

## Associate of Applied Science

To earn this degree,  
you must have  
61-68 credits in the  
following areas:

General Education Core	19
Technical Core	12
Specialty Core	18-21
Locally Determined Courses	12-16

### You Must Have

#### GENERAL EDUCATION

Required Courses		Credit Hours
**COM	Communications Course OR	3
**ENG	English Course	3
ENG 111	English Composition	3
MAT 111	Intermediate Algebra	3
MAT 121	Geometry/Trigonometry	3
PHY 100	Technical Physics OR	4
**PHY 101	Physics I	4
*	Humanities/Social Sciences Elective	3

#### TECHNICAL

IDS 102	Introduction to Print Reading	3
^IDS 260	Quality Control and Advanced Problem Solving	3
TEC 104	Computer Fundamentals for Technology	3
TEC 113	Basic Electricity	3

### Choose One of the Following Specialties

#### HEATING, VENTILATION, AND AIR CONDITIONING

#### SPECIALTY (33 CREDITS)

HEA 101	Heating Fundamentals	3
HEA 103	Refrigeration I	3
HEA 104	Heating Service	3
HEA 106	Refrigeration II	3
HEA 202	Electrical Circuits and Controls	3
IDS 103	Motors and Motor Controls	3
IDS 114	Introductory Welding	3
	Locally Determined Courses	12

#### INDUSTRIAL MAINTENANCE

#### SPECIALTY (33-34 CREDITS)

IDS 103	Motors and Motor Controls	3
IDS 104	Fluid Power Basics	3
IDS 114	Introductory Welding	3
IMT 201	Fluid Power Systems (Hydraulics/Pneumatics)	3
IMT 203	Machine Maintenance/Installation	3
IMT 205	Programmable Controllers I OR	3
AMT 201	Manufacturing Systems Control (PLCs)	3
IMT 207	Electrical Circuits	3
	Locally Determined Courses	12-13

**Specialties Continued Next Page**

# Industrial Technology

## Associate of Applied Science—Specialties

		Required Courses	Credit Hours
MACHINE TOOL SPECIALTY (33 CREDITS)	DSN 227 IDS 114 MTT 101 MTT 110 MTT 204 TEC 101 WLD 120	Geometric Dimensioning and Tolerancing Introductory Welding Introduction to Machining Turning and Milling Processes Abrasive Processes I Manufacturing Processes Metallurgy Fundamentals Locally Determined Courses	3 3 3 3 3 3 3 12
MECHANICAL MAINTENANCE SPECIALTY (37 CREDITS)	IDS 103 IDS 104 IDS 114 IMT 201 IMT 203 IMT 211 MTT 101	Motors and Motor Controls Fluid Power Basics Introductory Welding Fluid Power Systems Machine Maintenance/Installation Advanced Industrial Mechanics I Introduction to Machining Locally Determined Courses	3 3 3 3 3 3 3 16
TOOL AND DIE SPECIALTY (33 CREDITS)	DSN 227 IDS 114 MTT 206 MTT 207 MTT 225 TEC 101 WLD 120	Geometric Dimensioning and Tolerancing Introduction to Welding Tooling Design I Tooling Design II Mold Making Manufacturing Processes Metallurgy Fundamentals Locally Determined Courses	3 3 3 3 3 3 3 12
WELDING SPECIALTY (30 CREDITS)	WLD 100 WLD 108 WLD 109 WLD 120 WLD 205 WLD 207	Welding Processes Shielded Metal Arc Welding I Oxy Acetylene Gas Welding and Cutting Metallurgy Fundamentals Welding Codes and Testing Gas Metal Arc (MIG) Welding Locally Determined Courses	3 3 3 3 3 3 12

**Key** (See page 2 for definitions)

\* Elective   \*\* Locally Determined   ^ Capstone Course

# Industrial Technology

## Technical Certificate

To earn this degree,  
you must have 39  
credits in the  
following areas:

General Education Core	6
Technical Core	3
Specialty Core	6
Locally Determined Courses	24

You Must Have	Required Courses	Credit Hours
GENERAL EDUCATION	**COM 102      Introduction to Interpersonal Communication OR **ENG 111      English Composition *                   General Education Elective	3 3 3
TECHNICAL	TEC 113      Basic Electricity	3

### Choose One of the Following Specialties

HEATING, VENTILATION, & AIR CONDITIONING SPECIALTY (30 CREDITS)	HEA 101      Heating Fundamentals HEA 103      Refrigeration I Locally Determined Courses	3 3 24
INDUSTRIAL MAINTENANCE SPECIALTY (30 CREDITS)	IDS 102      Introduction to Print Reading IDS 104      Fluid Power Basics Locally Determined Courses	3 3 24
MACHINE TOOL SPECIALTY (30 CREDITS)	MTT 110      Turning and Milling Processes TEC 101      Manufacturing Processes Locally Determined Courses	3 3 24
TOOL AND DIE SPECIALTY (30 CREDITS)	MTT 110      Turning and Milling Processes TEC 101      Manufacturing Processes Locally Determined Courses	3 3 24
WELDING SPECIALTY (30 CREDITS)	WLD 108      Shielded Metal Arc Welding I WLD 207      Gas Metal Arc (MIG) Welding Locally Determined Courses	3 3 24

# Machine Tool Technology

## Program Description

The Machine Tool Technology program prepares students for the metals manufacturing industry. Graduates are employed as skilled machinists and tool and die makers. The curriculum was developed in cooperation with the National Tooling and Machining Association. The program meets the national skill standards for the industry, with National Institute for Metalworking Skills (NIMS) certification built into the student exit evaluation.

The associate of applied science degree requires 64 credits. Students graduating from the Machine Tool Technology program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- *Associate of Applied Science (64 Credits)*

### Specialties Offered:

*None*

### Program Available at:

*Indianapolis*

# Machine Tool Technology

## Associate of Applied Science

To earn this degree,  
you must have 64  
credits in the  
following areas:

General Education Core	19
Technical Core	12
Specialty Core	33
Locally Determined Courses	N/A

### You Must Have

	Required Courses	Credit Hours
GENERAL EDUCATION		
COM 102	Introduction to Interpersonal Communication	3
ECN 101	Economics Fundamentals	3
ENG 111	English Composition	3
MAT 112	Functional Mathematics	3
MAT 121	Geometry/Trigonometry	3
PHY 100	Technical Physics	4
TECHNICAL		
IDS 102	Introduction to Print Reading	3
QSC 101	Quality Control Concepts and Techniques I	3
TEC 104	Computer Fundamentals for Technology	3
TEC 113	Basic Electricity	3
MACHINE TOOL SPECIALTY (33 CREDITS)		
DCT 227	Geometric Dimensioning and Tolerancing	3
DSN 103	CAD Fundamentals	3
IDS 114	Introductory Welding	3
MTT 101	Introduction to Machining	3
MTT 208	CNC Programming I	3
MTT 240	Machine Operations I	4
MTT 241	Machine Operations II	4
TEC 102	Technical Graphics	3
	Choose a final semester option:	
MTT 209	CNC Programming II	3
	AND	
MTT 242	CNC Machining	4
	OR	
MTT 243	Tool and Die Making I	3
	AND	
MTT 244	Tool and Die Making II	4

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Manufacturing Technology

## Degrees Available:

- Associate of Applied Science (61-64 Credits)
- Associate of Science—Manufacturing Technology (69 Credits)
- Associate of Science—Computer Integrated Manufacturing (63 Credits)
- Technical Certificate (30-39 Credits)

## Program Description

The Manufacturing Technology program is a multi-disciplinary program designed to prepare students for technician-level positions. Specialty areas allow students to choose an emphasis in plastics, quality assurance, computer-integrated manufacturing, computer-aided design/computer aided manufacturing, computer numerical control or welding. Graduates are prepared to perform many facets of manufacturing including set-up, troubleshooting, processing and quality control.

Skills are acquired through lectures, demonstrations and hands-on experiences. Lab activities include the use of modern equipment and techniques currently found in industry. This training provides a foundation for any graduate to enter the workforce and continue skill enhancement.

Associate of applied science degrees require 61-64 credits. Manufacturing Technology students wishing to pursue a bachelor's of science in Manufacturing Technology or bachelor's of science in Computer Integrated Manufacturing at Indiana State University and enter as a junior-year student may complete the associate of science degree program in Manufacturing Technology. Students should choose the appropriate associate of science curriculum for their baccalaureate goal in manufacturing. Students completing the associate of science program will also be able to enter the workforce, as well as to transfer to ISU. Technical certificates and career development certificates also are available. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Manufacturing Technology program participate in evaluations of proficiency in general and technical education.

## Specialties Offered:

- Computer-Aided Design & Manufacturing
- Computer Integrated Manufacturing
- Computer Numerical Control
- Plastics
- Quality Assurance
- Tool and Die
- Welding

## Program Available at:

Evansville  
Fort Wayne  
Lafayette  
Madison  
Muncie  
Richmond  
Sellersburg  
South Bend  
Terre Haute

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Manufacturing Technology

## Associate of Applied Science

To earn this degree,  
you must have  
61-64 credits in the  
following areas:

General Education Core	19
Technical Core	21
Specialty Core	12-15
Locally Determined Courses	9

### You Must Have

	Required Courses	Credit Hours
GENERAL EDUCATION	COM 101 Fundamentals of Public Speaking ENG 111 English Composition *MAT 111 Intermediate Algebra AND *MAT 121 Geometry/Trigonometry OR *MAT 131 Algebra/Trigonometry I AND *MAT 132 Algebra/Trigonometry II OR *MAT 133 College Algebra AND MAT 134 Trigonometry PHY 101 Physics I * Humanities/Social Sciences Elective	3 3 3 3 3 3 3 3 4 2 4 3
TECHNICAL	IDS 104 Fluid Power Basics ^MFG 260 Advanced Problem Solving Techniques QSC 101 Quality Control Concepts and Techniques I TEC 101 Manufacturing Processes TEC 102 Technical Graphics TEC 104 Computer Fundamentals for Technology TEC 113 Basic Electricity	3 3 3 3 3 3 3
CAD/CAM SPECIALTY (24 CREDITS)	DSN 103 CAD Fundamentals DSN 227 Geometric Dimensioning and Tolerancing MTT 208 CNC Programming I MTT 220 CAD/CAM I MTT 221 CAD/CAM II Locally Determined Courses	3 3 3 3 3 9

### Choose One of the following Specialties

Specialties Continued Next Page

# Manufacturing Technology

## Associate of Applied Science—Specialties

		Required Courses	Credit Hours
CIM SPECIALTY (24 CREDITS)	AMT 102 AMT 201  IMT 205 AMT 202 AMT 203 AMT 205	Introduction to Robotics Manufacturing Systems Control OR Programmable Controllers I Work Cell Design and Integration Automation Electronics Automated Manufacturing Systems Locally Determined Courses	3 3  3 3 3 3 9
CNC SPECIALTY (24 CREDITS)	DSN 227 MTT 208 MTT 209 MTT 210 MTT 211	Geometric Dimensioning and Tolerancing CNC Programming I CNC Programming II Interactive CNC Advanced Programming Techniques Locally Determined Courses	3 3 3 3 3 9
PLASTICS SPECIALTY (24 CREDITS)	PMT 101 PMT 106 PMT 107 PMT 108 PMT 209	Introduction to Plastics Introduction to Polymer Science Injection Molding Extrusion Processes Manufacturing of Plastic Products Locally Determined Courses	3 3 3 3 3 9
QUALITY ASSURANCE SPECIALTY (21 CREDITS)	QSC 102 QSC 202 QSC 203 QSC 204	Statistical Process Control Quality Control Concepts and Techniques II Metrology Total Quality Management Locally Determined Courses	3 3 3 3 9
TOOL AND DIE SPECIALTY (24 CREDITS)	DSN 227 MTT 206 MTT 207 MTT 225 WLD 120	Geometric Dimensioning and Tolerancing Tooling Design I Tooling Design II Introduction to Mold Making Metallurgy Fundamentals Locally Determined Courses	3 3 3 3 3 9
WELDING SPECIALTY (21 CREDITS)	WLD 100 WLD 120 WLD 205 WLD 207	Welding Processes Metallurgy Fundamentals Welding Codes, Specifications, and Estimating Gas Metal Arc (MIG) Welding Locally Determined Courses	3 3 3 3 9

# Manufacturing Technology

## Associate of Science—Manufacturing Technology

To earn this degree,  
you must have  
61 credits in the  
following areas:

General Education Core	31
Technical Core	30
Specialty Core	N/A
Locally Determined Courses	N/A



Curriculum designed for transfer  
to Indiana State University's BS in  
Manufacturing Technology  
program

### You Must Have

#### GENERAL EDUCATION

	Required Courses	Credit Hours
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion	3
	OR	
ENG 211	Technical Writing	3
MAT 131	Algebra/Trigonometry I	3
MAT 132	Algebra/Trigonometry II	3
PHY 101	Physics I	4
***	Humanities/Social Sciences Electives	12

#### TECHNICAL

DSN 103	CAD Fundamentals	3
ELT 121	Circuits I	3
ELT 122	Circuits II	3
IDS 104	Fluid Power Basics	3
QSC 101	Quality Control Concepts and Techniques I	3
TEC 101	Manufacturing Processes	3
TEC 102	Technical Graphics	3
TEC 104	Computer Fundamentals for Technology	3
***	Manufacturing Electives	6

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

\*\*\* Electives from courses that transfer to ISU

# Manufacturing Technology

## Associate of Science—Computer Integrated Manufacturing

To earn this degree,  
you must have  
61 credits in the  
following areas:

General Education Core	28
Technical Core	33
Specialty Core	N/A
Locally Determined Courses	N/A



Curriculum designed for  
transfer to Indiana State  
University's BS in Computer  
Integrated Manufacturing  
program

### You Must Have

### Required Courses

**Credit  
Hours**

#### GENERAL EDUCATION

COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion	3
	OR	
ENG 211	Technical Writing	3
MAT 131	Algebra/Trigonometry I	3
MAT 132	Algebra/Trigonometry II	3
PHY 101	Physics I	4
***	Humanities/Social Sciences Electives	9

#### TECHNICAL

AMT 102	Introduction to Robotics	3
AMT 202	Work Cell Design and Integration	3
AMT 203	Automation Electronics	3
AMT 205	Automated Manufacturing Systems	3
ELT 121	Circuits I	3
ELT 122	Circuits II	3
IDS 104	Fluid Power Basics	3
TEC 101	Manufacturing Processes	3
QSC 101	Quality Control Concepts and Techniques I	3
TEC 102	Technical Graphics	3
TEC 104	Computer Fundamentals for Technology	3

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

\*\*\* Elective from those courses that transfer to ISU.

# Manufacturing Technology

## Technical Certificate

To earn this degree,  
you must have  
30-39 credits in the  
following areas:

General Education Core	6
Technical Core	3
Specialty Core	6
Locally Determined Courses	15-24

### You Must Have

#### GENERAL EDUCATION

Required Courses	Credit Hours	
COM 102	Introduction to Interpersonal Communication OR	3
ENG 111	English Composition	3
MAT 111	Intermediate Algebra	3

#### TECHNICAL

TEC 104	Computer Fundamentals for Technology	3
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### Choose One of the Following Specialties

#### CAD/CAM SPECIALTY (21 CREDITS)

MTT 110	Turning and Milling Processes	3
TEC 101	Manufacturing Processes	3
	Locally Determined Courses	15

#### CNC SPECIALTY (30 CREDITS)

MTT 208	CNC Programming I	3
MTT 209	CNC Programming II	3
	Locally Determined Courses	24

#### PLASTICS-EXTRUSION MOLDING SPECIALTY (21 CREDITS)

PMT 101	Introduction to Plastics	3
PMT 108	Extrusion Processes	3
	Locally Determined Courses	15

#### PLASTICS-INJECTION MOLDING SPECIALTY (21 CREDITS)

PMT 101	Introduction to Plastics	3
PMT 107	Injection Molding	3
	Locally Determined Courses	15

#### TOOL AND DIE SPECIALTY (30 CREDITS)

MTT 110	Turning and Milling Processes	3
TEC 101	Manufacturing Processes	3
	Locally Determined Courses	24

# Quality Science

## Program Description

The Quality Science program is competency-based and is designed to meet the ongoing needs of business, industry and the student. The program develops technical skills, general knowledge, and critical thinking and problem solving abilities of program graduates. The program is based upon the latest technology available and makes extensive use of the laboratory to complete the theory-to-practice cycle. Broad-based technical skills and critical thinking processes assist the student in adapting to changes in the work environment and allow advancement in the field.

Associate of applied science degrees require 61 credit hours in Quality Science. Specialties may be pursued in industrial laboratory and quality management. Students graduating from the Quality Science program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- *Associate of Applied Science (61 Credits)*

### Specialties Offered:

- *Industrial Laboratory*
- *Quality Management*

### Program Available at:

*Terre Haute  
Lafayette*

# Quality Science

## Associate of Applied Science

To earn this degree,  
you must have 61  
credits in the  
following areas:

General Education Core	19
Technical Core	18
Specialty Core	12
Locally Determined Courses	12

### You Must Have

#### GENERAL EDUCATION

	Required Courses	Credit Hours
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
MAT 111	Intermediate Algebra	3
MAT 131	Algebra/Trigonometry I	3
PHY 101	Physics I	4
*	Humanities/Social Sciences Elective	3

#### TECHNICAL

ILT 101	Industrial Laboratory Techniques	3
QSC 101	Quality Control Concepts and Techniques I	3
QSC 102	Statistical Process Control	3
^QSC 204	Total Quality Management	3
TEC 101	Manufacturing Processes	3
TEC 104	Computer Fundamentals for Technology	3

### Choose One of the following Specialties

#### INDUSTRIAL LABORATORY SPECIALTY (24 CREDITS)

CHM 101	Chemistry I	3
CHM 102	Chemistry II	3
ILT 201	Industrial Instrumentation and Techniques I	3
ILT 202	Industrial Instrumentation and Techniques II	3
	Locally Determined Courses	12

#### QUALITY MANAGEMENT SPECIALTY (24 CREDITS)

IDS 102	Introduction to Print Reading	3
QSC 201	Advanced Statistical Process Control	3
QSC 202	Quality Control Concepts and Techniques II	3
QSC 203	Metrology	3
	Locally Determined Courses	12

#### Key (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Recreational Vehicle Service Technology

## Program Description

The Recreational Vehicle Service program prepares students for the field of recreational vehicle repair and service. Graduates are employed as technicians who provide all general maintenance on appliances, chassis, and body; install accessories; and repair structural damage. Industry contact is developed and maintained through the required internship program. Ivy Tech/Elkhart is one of nine sites nationwide approved by the Recreational Vehicle Industry Association (RVIA) to offer the program.

An associate of applied science degree and a technical certificate are offered. Students graduating from the Recreational Vehicle Service Technology program participate in evaluations of proficiency in general and technical education.

### Degrees Available:

- *Associate of Applied Science (64 Credits)*
- *Technical Certificate (46 Credits)*

### Specialties Offered:

None

### Program Available at:

Elkhart

# Recreational Vehicle Service Technology

## Associate of Applied Science

To earn this degree,  
you must have 64  
credits in the  
following areas:

General Education Core	18
Technical Core	40
Other Required Courses	6
Locally Determined Courses	N/A

### You Must Have

#### GENERAL EDUCATION

Required Courses		Credit Hours
COM 101	Fundamentals of Public Speaking	3
COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
MAT 112	Functional Mathematics	3
*	Life/Physical Sciences Elective	3
*	Social Sciences/Humanities Elective	3

#### TECHNICAL

RVT 101	Introduction to RV Service/Customer Relations	2
RVT 102	Electrical Concepts	3
RVT 103	Fluid Power, Heat, and Mechanical Systems	4
RVT 104	LP Gas	2
RVT 105	Electrical Systems Service	5
RVT 106	RV Braking, Suspension, and Towing Systems	3
RVT 107	RV Air Conditioning and Absorption Refrigeration Service	4
RVT 108	Heating Systems/Accessory Installation, and Service	3
RVT 109	Water Systems and Water Heating	2
RVT 110	Interior Coach	3
RVT 111	Exterior Coach	4
RVT 201	Metal Processing and Metallurgy	2
TEC 104	Computer Fundamentals for Technology	3

#### OTHER REQUIRED COURSES

RVT 220	Recreational Vehicle Retailing	3
^RVT 280	Co-op/Internship	3

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Recreational Vehicle Service Technology

## Technical Certificate

To earn this degree,  
you must have 46  
credits in the  
following areas:

General Education Core	6
Technical Core	40
Specialty Core	N/A
Locally Determined Courses	N/A

### You Must Have

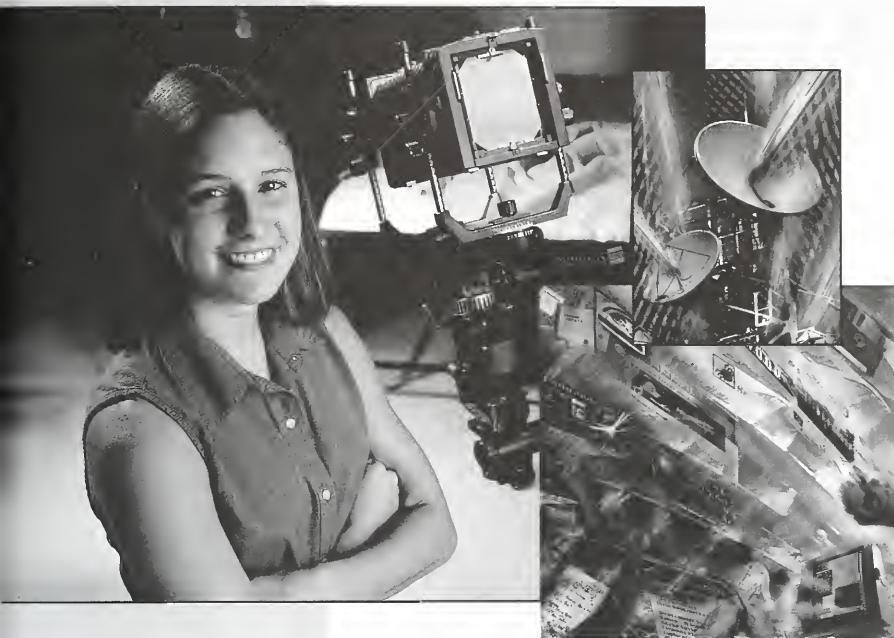
### Required Courses

Credit  
Hours

GENERAL EDUCATION	ENG 111 MAT 112	English Composition Functional Mathematics	3 3
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### TECHNICAL

RVT 101	Introduction to RV Service/Customer Relations	2
RVT 102	Electrical Concepts	3
RVT 103	Fluid Power, Heat, and Mechanical Systems	4
RVT 104	LP Gas	2
RVT 105	Electrical Systems Service	5
RVT 106	RV Braking, Suspension, and Towing Systems	3
RVT 107	RV Air Conditioning and Absorption Refrigeration Service	4
RVT 108	Heating Systems/Accessory Installation and Service	3
RVT 109	Water Systems and Water Heating	2
RVT 110	Interior Coach	3
RVT 111	Exterior Coach	4
RVT 201	Metal Processing and Metallurgy	2
TEC 104	Computer Fundamentals for Technology	3



# Visual Technologies

Ivy Tech State College offers associate of science and associate of applied science degrees in the areas of interior design, video technology and visual communications. Within the Visual Communications program, specialty areas are offered in graphic design, graphic media production, multimedia, and photography.

Students entering the Visual Technologies Division are exposed to a broad technical core of courses which represent key topics such as organizing the visual field, color theory and applications, image input technology, the computer as a powerful design and image manipulation tool, the professional visual artist as a business person and the exit portfolio.

Ivy Tech's Visual Technologies Division strives for a continuous interaction between students and industries through the jury evaluation system, guest speakers, field trips, advisory committees and field experience opportunities.



# Interior Design

## Program Description

The Interior Design program prepares students for careers by providing the experiences and competencies in research techniques, problem solving and presentation skills necessary to meet today's professional interior design standards.

Structured courses in spatial relationships and organization, environmental issues, human factors, safety and barrier-free guidelines, and project management are incorporated into competent and creative project solutions. These project solutions include residential and contract design case studies using state-of-the-art technologies.

Connecting students to potential employers is accomplished through supervised design projects for community service organizations, related class field trips and projects juried by area professionals. Field study opportunities also are provided which allow students to experience first-hand the daily operations and organization of a successful interior design firm. The culmination of student activity is the completion of an individual exit portfolio and resume which demonstrate the skills and knowledge of the interior design graduate. This portfolio is the primary tool used in job-seeking efforts.

The two-year program requiring 66 semester hours culminates with an associate of applied science degree. Entry portfolios will be reviewed for basic drafting, design and drawing skills. Students graduating from the Interior Design program participate in evaluations of proficiency in general and technical education.

## Degrees Available:

- Associate of Applied Science (66 Credits)

## Specialties Offered:

*None*

## Program Available at:

*Evansville  
South Bend*

# Interior Design

## Associate of Applied Science

To earn this degree,  
you must have 66  
credits in the  
following areas:

General Education Core	18
Technical Core	18
Other Required Courses	12
Locally Determined Courses	18

### You Must Have

#### GENERAL EDUCATION

Required Courses		Credit Hours
ARH 101	Survey of Art and Culture I	3
ARH 102	Survey of Art and Culture II	3
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
**MAT 111	Intermediate Algebra	3
	OR	
**MAT 112	Functional Mathematics	3
SCI 111	Physical Science	3

#### TECHNICAL

VIS 101	Fundamentals of Design	3
INT 102	Residential Drafting and Construction	3
INT 103	Introduction to Interior Design	3
INT 108	Interior Design II	3
INT 200	Commercial Interior Detailing	3
INT 216	CAD for Interior Design	3

#### OTHER REQUIRED COURSES

INT 109	History of Interiors I	3
INT 201	Interior Finishes	3
INT 203	Professional Practices	3
INT 209	Special Projects/Portfolio Preparation	3
	Locally Determined Courses	18

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Video Technology

## Program Description

The Video Technology program prepares students for professional careers in the visual communications field. The program reflects the visual communications industry needs and standards by providing experiences in research, problem solving and hands-on procedures in video and multi-media program production.

Students learn to create scripts and storyboards, develop a budget and produce a project budget based on client needs. In video production, students learn to use professional cameras, direct the production and supervise production personnel. Students gain experience in studio and remote location techniques. Post-production activities include audio dubbing, voice-over narration, digital-imaging, editing, computer graphics, animation and special effects. Students learn techniques in audio recording, mixing and electronic audio enhancement using both analog and digital systems. Students also learn techniques in 35mm photography and presentation technology.

The faculty bring to the classroom the knowledge and procedures they gain through their professional activities and industry associations. Students may elect to do an externship at an area studio. All students produce an exit portfolio which demonstrates the quality and scope of their knowledge and skills.

The associate of applied science degree in video technology requires 66 credits for completion. Students graduating from the Video Technology program participate in evaluations of proficiency in general and technical education.

## Degrees Available:

- *Associate of Applied Science (66 Credits)*

## Specialties Offered:

*None*

## Program Available at:

*South Bend*

# Video Technology

## Associate of Applied Science

To earn this degree,  
you must have 66  
credits in the  
following areas:

General Education Core	18
Technical Core	18
Other Required Courses	12
Locally Determined Courses	18

### You Must Have

#### GENERAL EDUCATION

Required Courses		Credit Hours
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
**MAT 111	Intermediate Algebra	3
OR		
**MAT 112	Functional Mathematics	3
SCI 111	Physical Science	3
**	Humanities/Art History Survey I Course	3
**	Humanities/Art History Survey II Course	3

#### TECHNICAL

VID 101	Audio/Video Systems Theory	3
VID 104	Studio I	3
VIS 101	Fundamentals of Design	3
VIS 105	Video and Sound	3
VIS 115	Computer Graphics	3
^VIS 207	Portfolio Preparation	3

#### OTHER REQUIRED COURSES

VID 102	Media Technology	3
VID 106	Production Planning	3
VID 107	Video Production II	3
VID 109	Studio II	3
	Locally Determined Courses	18

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Visual Communications

## Program Description

Students entering the Visual Communications program are exposed to a broad technical core of courses representing key topics such as organizing the visual field, color theory and application, image acquisition and manipulation technology, the computer as a powerful tool, the professional visual artist as a business person and the exit portfolio.

The program offers an associate of applied science degree with specialties in the areas of graphic design, graphic media production, multimedia, and photography. Students graduating from the Visual Communications program participate in evaluations of proficiency in general and technical education.

## Degrees Available:

- *Associate of Applied Science (66 Credits)*

## Specialties Offered:

- *Graphic Design*
- *Graphic Media Production*
- *Multimedia*
- *Photography*

## Program Available at:

*Columbus  
Evansville  
Indianapolis  
Sellersburg  
South Bend  
Terre Haute*

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

# Visual Communications

## Associate of Applied Science

To earn this degree,  
you must have 66  
credits in the  
following areas:

General Education Core	18
Technical Core	18
Specialty Core	12-18
Locally Determined Courses	12-18

### You Must Have

#### GENERAL EDUCATION

Required Courses		Credit Hours
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
**MAT 111	Intermediate Algebra	3
	OR	
**MAT 112	Functional Mathematics	3
SCI 111	Physical Science	3
**	Humanities/Social Sciences Course	3
**	Humanities/Social Sciences Course	3

#### TECHNICAL

VIS 101	Fundamentals of Design	3
VIS 102	Fundamentals of Imaging	3
VIS 115	Computer Graphics	3
VIS 201	Electronic Imaging	3
VIS 205	Business Practices for Visual Artists	3
^VIS 207	Portfolio Preparation	3

### Choose One of the Following Specialties

#### GRAPHIC DESIGN SPECIALTY (30 CREDITS)

ART 111	Drawing for Visualization	3
ART 112	Electronic Layout	3
ART 114	Graphic Design	3
ART 115	Typography	3
ART 117	Production	3
ART 217	Advanced Graphic Design	3
	Locally Determined Courses	12

**Specialties Continued Next Page**

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# Visual Communications

## Associate of Applied Science—Specialties

		Required Courses	Credit Hours
GRAPHIC MEDIA PRODUCTION SPECIALTY (30 CREDITS)	GRA 102 GRA 106 GRA 201 GRA 202	Introduction to Machine Printing Introduction to Color Printing Photomechanical Reproduction Science of Color Locally Determined Courses	3 3 3 3 18
MULTIMEDIA SPECIALTY (30 CREDITS)	ART 115 ART 116 PHO 106 VIS 103 VIS 105 VIS 209	Typography Electronic Illustration Studio Practices Introduction to Multimedia Video and Sound 3D Rendering and Animation Locally Determined Courses	3 3 3 3 3 3 12
PHOTOGRAPHY SPECIALTY (30 CREDITS)	PHO 104 PHO 106 PHO 107 PHO 109 PHO 201 PHO 204	Basic Photography Studio Practices Intermediate Photography Studio Lighting Techniques Principles of Color Photography Commercial Photography Techniques I Locally Determined Courses	3 3 3 3 3 3 12

**Key** (See page 2 for definitions)

\* Elective \*\* Locally Determined ^ Capstone Course

# General Education and Support Services

The primary function of the General Education and Support Services (GESS) Division is to provide courses that add to the breadth of knowledge that each student should gain from the college experience, regardless of his or her program. General education courses are an integral part of the curriculum supporting students who pursue technical degree programs as well as those who pursue liberal arts degree programs at selected Ivy Tech sites that are Community College of Indiana campuses. The College believes that each graduate should achieve a certain body of knowledge, held in common with all educated people.

General education courses cover a range of subjects including communications (written and oral), social sciences, humanities, mathematics, and life and physical sciences.

Basic skills advancement coursework includes English as a second language, language arts (spelling, writing, reading, vocabulary building), mathematics (mathematics and basic algebra), life and physical sciences (prep/science literacy courses in chemistry and the life sciences), and college orientation (college skills, critical thinking, computer literacy and basic keyboarding). In addition to these courses campuses may provide regionally determined courses to meet unique local needs. Many basic skills advancement programs provide basic skills assessment, one-on-one tutoring, multimedia, technology-based and individualized instruction, special needs counseling and other services in addition to courseware.



The General Technical Studies (GTS) certificate program provides opportunities for students who may not be ready to enter a degree program due to lack of preparation or other reasons. GTS helps these students define and meet their educational objectives. GTS serves students who may be in need of correcting deficient academic skills before enrolling in a technical degree program, have yet to decide upon pursuing a specific course of study, are seeking admission into one of the college's selective programs, wish to examine an occupational program, are in need of a career-oriented educational exploration, or are in need of an educational foundation for a related one- or two-year program and wish to pursue a one-year program of general technical studies. The GTS program is available at all 23 campuses. Interested students should contact their local campus and ask for the regional specifications of the GTS curriculum.

# General Education Courses

## Communications

*The following courses can meet specific requirements or serve as communications electives.*

### **COM 101 Fundamentals of Public Speaking**

**3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrate competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading 80-100). Introduces fundamental concepts and skills for effective public speaking, including preparation and delivery of informative and persuasive presentations. Includes instruction in the use of visual aids and critical listening.

### **COM 102 Introduction to Interpersonal Communication**

**3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrate competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading 80-100). Focuses on the process of interpersonal communication as a dynamic and complex system of interactions. Stresses the importance of understanding and applying interpersonal communication theory in work, family and social relationships. Uses lecture/discussion format.

### **ENG 111 English Composition**

**3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrate competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading 80-100). Provides a foundation in rhetorical principles, communication strategies and inquiry processes that can be successfully applied in personal academic or professional writing situations. Initiates and integrates the composing process with critical reading and thinking.

### **ENG 112 Exposition and Persuasion**

**3 Credits**

Prerequisites: ENG 111 - English Composition. Builds on the writing skills taught in ENG 111 and emphasizes research-based analytic and persuasive writing. Requires students to complete other collaborative and individual projects.

### **ENG 211 Technical Writing**

**3 Credits**

Prerequisites: ENG 111 - English Composition. Builds on the writing skills taught in ENG 111. Requires students to prepare technical reports for various purposes using standard research techniques, documentation and formatting as appropriate. Requires students to demonstrate both written and oral competencies.

## Social Sciences

*The following courses can meet specific requirements or serve as social sciences electives.*

### **APO 112 State and Local Government**

**3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading 80-100). Provides a study of the basic organization and historical developments of the states, cities, counties, townships and special districts. Special emphasis is given to the federal relationships of the states with the central government and the struggle over states' rights. Also emphasized are the problems facing state and local governments in the fields of urban renewal, crime, transportation, finance, education and governmental reform.†

### **APO 201 Introduction to Political Science**

**3 Credits**

Prerequisites: ENG 111 - English Composition. Provides a study of the basic principles of government and its institutions. Also provides a background for other courses in government.†

### **APO 220 Public Administration**

**3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading 80-100). Examines the structure and function of the bureaucratic arm of the executive branch of government. Special emphasis will be placed on the internal workings of government agencies of administration on the local, state and national levels. Considerable attention will be paid to the power exerted through these agencies.†

†This is a Vincennes University course. More information may be found in the Vincennes University catalog.

**3 Credits****SO 154 Cultural Anthropology**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 80-100) and MAT 044 - Mathematics. Surveys the variety of social and cultural developments within the human family. Various cultural types and major societal structures such as kinship terminology, patterns of production and consumption and social institutions will be dealt with in a variety of cultural settings.†

**3 Credits****SO 245 Cultural Diversity**

Prerequisites: ENG 111 - English Composition and SOC 111 - Introduction to Sociology. Provides students with an opportunity to explore their own ethnic roots. Increases understanding of the main ethnic groups in the United States: Appalachians, Native Americans, Afro Americans, Asian Americans, Pacific Islanders and Hispanics. The social and religious impact on the cultural integration of these groups will be introduced. Discussions on how these aspects of the United States culture may affect international dialogues will also be included.†

**3 Credits****SO 252 Social Problems**

Prerequisites: SOC 111 - Introduction to Sociology. Introduces some of the more complex and important problem areas in the American social context and includes a presentation of contemporary thinking relative to the identification, analysis and alleviation of these problems.†

**3 Credits****SO 253 Introduction to Social Psychology**

Prerequisites: SOC 111 - Introduction to Sociology and PSY 101 - Introduction to Psychology. Studies human behavior in social situations. Processes of communication, socialization, social role, social self and social groupings are emphasized.†

**3 Credits****SO 261 Sociology of Relationships and Families**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 80-100) and MAT 044 - Mathematics. Examines the sociological and psychological dynamics of dating, relationships, marriage, family life and parenting. Emphasis will be placed on how our contemporary society and culture is affecting these institutions and customs. The course will also explore the impact of divorce and stepfamilies on today's lifestyles.†

**3 Credits****ECN 101 Economics Fundamentals**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 80-100) and MAT 050 - Basic Algebra. Provides an introduction to the fundamentals of economics and their application to current economic problems.

**3 Credits****ECN 201 Principles of Macroeconomics**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 80-100) and MAT 111 - Intermediate Algebra or MAT 112 - Functional Mathematics. Develops a conceptual understanding of the forces affecting the level of national income, employment, interest rates and prices.

**3 Credits****ECN 202 Principles of Microeconomics**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 80-100) and MAT 111 - Intermediate Algebra or MAT 112 - Functional Mathematics. Develops an understanding of the process by which the market price mechanism allocates resources and influences individual behavior.

**3 Credits****POL 101 Introduction to American Government and Politics**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 80-100). Introduces the foundations, nature and dynamics of American government and politics including constitutional foundations, civil liberties and civil rights, federalism, political parties, public opinion, interest groups, media, nominations, campaigns, elections, the presidency, the judiciary, congress, bureaucracies and public policy.

**3 Credits****PSY 101 Introduction to Psychology**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 80-100) and MAT 044 - Mathematics. Provides a general survey of the science of psychology. Includes the study of research methodology, emotion, biological foundations, learning and cognition, perception, development, personality, abnormal psychology and social psychology.

†This is a Vincennes University course. More information may be found in the Vincennes University catalog.

**PSY 201 Lifespan Development****3 Credits**

Prerequisites: PSY 101 - Introduction to Psychology or SOC 111 - Introduction to Sociology. Covers human development from conception to death. Covers relevant research for each period.

**PSY 205 Abnormal Psychology****3 Credits**

Prerequisites: PSY 101 - Introduction to Psychology. Examines theories and research related to mental illness as well as etiology, pathology and treatment methods. Includes description of various disorders and personality problems.

**SES 207 World Geography****3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading 80-100) and MAT 044 - Mathematics. Applies geographic principles to interpretation of human activities in all major world regions. Cultural, economic and political aspects of major nations are emphasized.†

**SOC 111 Introduction to Sociology****3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading 80-100) and MAT 044 - Mathematics. Introduces students to the science of human society including fundamental concepts, descriptions and analyses of society, culture, the socialization process, social institutions and social change.

## Humanities

*The following courses can meet specific requirements or serve as humanities electives.*

**AHI 235 World Civilization I****3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading 80-100). Covers the development of early civilizations of the eastern hemisphere, the civilizations of Greece and Rome, the rise and growth of Christianity and Islam, early Oriental history, medieval Europe, the Renaissance and Reformation, power politics and diplomacy, the expansion of Europe and its effect on various civilizations, and scientific and intellectual developments to 1650.†

**AHI 236 World Civilization II****3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading 80-100). Covers 17th century absolutism, science and economics, the Enlightenment and the French Revolution; Romanticism and the Industrial Revolution; revolutions of the 19th century; colonialism and imperialism and their effects on underdeveloped areas; the prelude to World War I and the war itself; 20th century world politics and the Cold War; independence movements in Africa and Asia; and recent social and cultural developments.†

**ARH 101 Survey of Art and Culture I****3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading 80-100). Surveys painting, sculpture and architectural styles of ancient Mediterranean cultures to the Renaissance period. Provides a foundation for the study of art history.

**ARH 102 Survey of Art and Culture II****3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading 80-100). Surveys painting, sculpture and architectural styles from the Renaissance through the 20th Century. Emphasizes developing analytical skills.

**HAH 110 Art Appreciation****3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading 80-100). Explores the creative processes of humankind, its usages of specific traditional and contemporary media for communication and the study of periods and styles in art as they relate to the human condition.†

†This is a Vincennes University course. More information may be found in the Vincennes University catalog.

**HEL 220 Introduction to World Literature I****3 Credits**

Prerequisites: ENG 111 - English Composition. Surveys literary masterpieces and various literary types produced from Homer's time to Shakespeare's. Includes a study of drama, poetry (with some attention to epic form as well as shorter narrative verse) and the philosophic essay. Combines practice in advanced expository writing with literary study.†

**HEL 221 Introduction to World Literature II****3 Credits**

Prerequisites: ENG 111 - English Composition. Surveys selected major literary works and various literary types produced from the Jacobean period to the present. The course content includes work by Eastern, Continental, British and American authors. Instruction in research techniques and writing research papers is combined with literary study.†

**HEL 222 American Literature I****3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 30-100). Studies major American poets and prose writers, noting their relationship to contemporary English writers. The course emphasizes the early colonial, national and sectional periods of literature.†

**HEL 223 American Literature II****3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 30-100). Studies poets and prose writers of the so-called Second National Period of American Literature. The course also includes some present-day writers of poetry, prose and drama.†

**HEL 227 Introduction to World Fiction****3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 30-100). Examines fiction of various types and periods by Continental, Eastern, American and British writers.†

**HEL 240 Children's Literature****3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 30-100). Designed both for education majors who need to meet state requirements and for the general student who may wish to gain or regain appreciation for the best literature written for children. Classic and modern children's books, ranging from kindergarten to junior high level, will be read and discussed.†

**HEW 202 Creative Writing****3 Credits**

Prerequisites: ENG 111 - English Composition. Provides opportunity for creative expression through one or more of the literary genres — short fiction, novella, poetry, one-act drama and essay.†

**HLS 100 Conversational Spanish****2 Credits**

Prerequisites: None. Introduces basic vocabulary, structures and cultural information needed for communication while traveling in Spanish-speaking regions of the United States.†

**HLS 101 Spanish Level I****3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 30-100). Corequisites: HLS 102 - Spanish Vocabulary Level I. Introduces the Spanish language and culture with emphasis on listening comprehension. Guided communications tasks, vocabulary building and use of audio-visual aids, video, language lab and "less-stress" techniques are employed.†

**HLS 102 Spanish Vocabulary Level I****1 Credit**

Corequisites: HLS 101 - Spanish Level I. Builds word power for active recall and passive recognition.†

**HLS 103 Spanish Level II****3 Credits**

Prerequisites: HLS 101 - Spanish Level I, HLS 102 - Spanish Vocabulary Level I. Corequisites: HLS 104 - Spanish Vocabulary Level II. Provides structured oral communication, vocabulary building with an emphasis on speaking. Introduces reading of graded and glossed materials, basic grammatical structures, writing.†

†This is a Vincennes University course. More information may be found in the Vincennes University catalog.

**HLS 104 Spanish Vocabulary Level II****1 Credit**

Corequisites: HLS 103 - Spanish Level II. Builds word power for active recall and passive recognition.†

**HLS 201 Spanish Level III****3 Credits**

Prerequisites: HLS 103 - Spanish Level II, HLS 104 - Spanish Vocabulary Level II. Corequisites: HLS 202 - Spanish Vocabulary Level III. Provides emphasis on reading. Conversation is coordinated with reading of cultural text, written and oral reports. Continues study of grammar structure vocabulary building.†

**HLS 202 Spanish Vocabulary Level III****1 Credit**

Corequisites: HLS 201 - Spanish Level III. Builds vocabulary and grammar to develop reading ability.†

**HLS 203 Spanish Level IV****3 Credits**

Prerequisites: HLS 201 - Spanish Level III, HLS 202 - Spanish Vocabulary Level III. Corequisites: HLS 204 - Spanish Vocabulary Level IV. Continues HLS 201 with an emphasis on writing, cultural and contemporary topics.†

**HLS 204 Spanish Vocabulary Level IV****1 Credit**

Corequisites: HLS 203 - Spanish Level IV. Builds vocabulary, can be specialized for students in technical areas.†

**HPP 213 Logic****3 Credits**

Prerequisites: ENG 111 - English Composition. Examines formal logic through a study of the principles and methods employed in the appraisal of arguments and methodology that will lead one's thinking to the accurate attainment of truth.†

**HPP 220 Philosophy of Religion****3 Credits**

Prerequisites: ENG 111 - English Composition. Studies the origin and nature of religion. After an initial view of recent philosophical analyses of the religious experience, major world religions (Hinduism, Buddhism, Taoism, Shinto, Judaism, Christianity, Islam, et al.) are examined for their specific content, structure and spirit.†

**HSY 101 Survey of American History I****3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrate competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading 80-100). Covers major themes and events in American history from the discovery era to the Civil War and Reconstruction.

**HSY 102 Survey of American History II****3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrate competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading 80-100). Covers major themes and events in American history from the Civil War and Reconstruction to the present.

**PHL 101 Introduction to Philosophy****3 Credits**

Prerequisites: ENG 111 - English Composition. Examines fundamental questions of philosophy such as the foundations of morality, skepticism and knowledge, the nature of mind, free will and determinism, and the existence of God. Emphasizes the evaluation of arguments and analysis of concepts.

**PHL 102 Introduction to Ethics****3 Credits**

Prerequisites: ENG 111 - English Composition. Examines major theories of ethics, theoretical issues, moral problems and issues and our responsibility to future generations.

## Mathematics

*The following courses can meet specific requirements or serve as mathematics electives.*

**MAT 111 Intermediate Algebra****3 Credits**

Prerequisites: A scaled score of 40 or higher on the Elementary Algebra section of the ASSET assessment, or a COMPASS score of 41-65 on the Algebra section, or successful completion of MAT 050 - Basic Algebra. Reviews algebraic terminology and laws, basic operations with real numbers and polynomials, scientific notation, linear equations and graphs, and factoring algebraic expressions. Provides an in-depth study of rational expressions, systems of linear equations, radicals, radical equations and quadratic equations. Introduces functions and function notation.

†This is a Vincennes University course. More information may be found in the Vincennes University catalog.

**MAT 112 Functional Mathematics****3 Credits**

Prerequisites: A scaled score of 40 or higher on the Elementary Algebra section of the ASSET assessment, or a COMPASS score of 41-65 on the Algebra section, or successful completion of MAT 050 - Basic Algebra. Through real-world approaches, presents mathematical concepts of measurement, proportion, geometry, equation solving and statistics.

**MAT 115 Statistics****3 Credits**

Prerequisites: A scaled score of 41 or higher on the Intermediate Algebra section of the ASSET assessment, or a COMPASS score of 66 or higher on the Algebra section, or successful completion of MAT 112 - Functional Mathematics or MAT 111 - Intermediate Algebra. Provides study in the collection, interpretation and presentation of descriptive and inferential statistics including measures of central tendency, probability, binomial and normal distributions, hypothesis testing of one- and two-sample populations, confidence intervals, chi-square testing, correlation, data description and graphical representations.

**MAT 121 Geometry-Trigonometry****3 Credits**

Prerequisites: A raw score of 13 or higher on the Geometry section of the ASSET assessment, or successful completion of MAT 111 - Intermediate Algebra or MAT 112 - Functional Mathematics. Provides study in geometry and trigonometry including polygons, similar figures, geometric solids, properties of circles, constructions, right triangles, angle measurements in radians and degrees, trigonometric functions and their application to right triangles, Pythagorean theorem, laws of sine and cosine, graphing of trigonometric functions, trigonometric identities, vectors and coordinate conversions.

**MAT 131 Algebra/Trigonometry I****3 Credits**

Prerequisites: A scaled score of 41 or higher on the Intermediate Algebra section of the ASSET assessment, or successful completion of MAT 111 - Intermediate Algebra. Provides study in algebra, including functions, exponential rules, linear equations, radicals, vectors, right triangle trigonometry, oblique triangles, graphs of sine and cosine functions.

**MAT 132 Algebra/Trigonometry II****3 Credits**

Prerequisites: Demonstrated mathematics competency through test-out or successful completion of MAT 131 - Algebra/Trigonometry I. Continues study in algebra and trigonometry including systems of equations, graphing of trigonometric functions, trigonometric equations, rectangular and polar coordinates, complex numbers, exponential and logarithmic functions and conics.

**MAT 133 College Algebra****4 Credits**

Prerequisites: A scaled score of 41 or higher on the Intermediate Algebra section of the ASSET assessment, or successful completion of MAT 111 - Intermediate Algebra. Presents an in-depth study of polynomials, radicals, rational expressions, inequalities, complex numbers, functions, matrices, graphs and conics.

**MAT 134 Trigonometry****2 Credits**

Prerequisites: A scaled score of 41 or higher on the Intermediate Algebra section of the ASSET assessment, or successful completion of MAT 111 - Intermediate Algebra. Presents an in-depth study of vectors, right triangle trigonometry, oblique triangles, graphs of trigonometric functions and an introduction to complex numbers.

**MAT 135 Finite Math****3 Credits**

Prerequisites: A scaled score of 41 or higher on the College Algebra section of the ASSET assessment, or a COMPASS score of 46 or higher on the College Algebra section, or successful completion of MAT 111 - Intermediate Algebra. Surveys solving and graphing linear inequalities, elementary set theory, matrices and their applications, linear programming and elementary probability.

**MAT 201 Brief Calculus****3 Credits**

Prerequisites: A COMPASS score of 46 or higher on the Trigonometry section (ASSET cannot be used), or MAT 111 - Intermediate Algebra and one of the following: MAT 121 - Geometry-Trigonometry, MAT 132 - Algebra/Trigonometry II, MAT 133 - College Algebra or MAT 135 - Finite Math. Studies the fundamental concepts and operations of calculus including the study of functions, limits, continuity, derivatives, points-of-inflection, first-derivative test, concavity, second-derivative test, optimization, antiderivatives, integration by substitution, integration by parts, and elementary applications of a definite integral.

## Life and Physical Sciences

*The following courses can meet specific requirements or serve as life and physical sciences electives.*

### **ANP 101 Anatomy and Physiology I**

**3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 80-100) and MAT 044 - Mathematics. Develops a comprehensive understanding of the close inter-relationship between anatomy and physiology as seen in the human organism. Introduces students to the cell, which is the basic structural and functional unit of all organisms, and covers tissues, integument, skeleton, muscular and nervous systems as an integrated unit.

### **ANP 102 Anatomy and Physiology II**

**3 Credits**

Prerequisites: ANP 101 - Anatomy and Physiology I. Continues the study of the inter-relationships of the systems of the human body.

### **ANP 201 Advanced Human Physiology**

**4 Credits**

Prerequisites: ANP 102 - Anatomy and Physiology II. Provides advanced study of human physiology. Emphasizes the study of the function of the nervous, muscular, circulatory, respiratory, urinary, digestive and endocrine systems, and their homeostatic mechanisms and system interaction. Focuses laboratory exercises on clinically relevant measurement of human function.

### **ANP 203 Human Anatomy and Physiology I**

**5 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 80-100) and MAT 044 - Mathematics. Provides a comprehensive study of the interrelationship between anatomy and physiology from chemical to cellular to organ interactions. Provides an in-depth study of each system of the body from a viewpoint of structure as well as function.

### **ANP 204 Human Anatomy and Physiology II**

**5 Credits**

Prerequisites: ANP 203 - Human Anatomy and Physiology I. Provides the remaining comprehensive study of the interrelationship between anatomy and physiology from chemical to cellular to organ interactions. Provides an in-depth study of each system of the body from a viewpoint of structure as well as function.

### **BIO 101 Introductory Biology**

**3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 80-100) and MAT 044 - Mathematics. Introduces the basic concepts of life. Includes discussion of cellular and organismal biology, genetics, evolution, ecology and interaction among all living organisms. Addresses applications of biology to society.

### **BIO 211 General Microbiology**

**3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 80-100) and MAT 044 - Mathematics. Presents an overview of microbiology which includes fundamentals, methods and materials. Introduces industrial and clinical microbiology, and special topics.

### **BIO 212 General Microbiology II**

**2 Credits**

Prerequisites: BIO 211 - General Microbiology and ANP 101 - Anatomy and Physiology I. Presents a secondary study of bacteria, viruses, fungi, rickettsia and parasites. Emphasizes the study of bacterial growth and control demonstrated by serological techniques.

### **CHM 101 Chemistry I**

**3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 80-100) and MAT 111 - Intermediate Algebra. Includes the science of chemistry and measurement, atomic theory and the periodic table, chemical bonding, stoichiometry and gases.

### **CHM 102 Chemistry II**

**3 Credits**

Prerequisites: CHM 101 - Chemistry I. Includes liquids and solids, solutions and solution concentrations, acids and bases, equilibrium, nuclear chemistry, and organic and biochemistry.

**4 Credits****PHY 100 Technical Physics**

Prerequisites: MAT 111 - Intermediate Algebra. Pre or Corequisites: MAT 121 - Geometry-Trigonometry or MAT 131 - Algebra/Trigonometry I. Introduces the concepts and applications of physics. Leads students to develop an integrated understanding of the theory and applications of measuring (or unit) systems, scalars, vectors, force, work, rates, energy, momentum, power, force transformers (simple machines), vibrations and waves, and time constants. Emphasizes understanding concepts, factual knowledge, computation and application.

**4 Credits****PHY 101 Physics I**

Prerequisites: MAT 121 - Geometry-Trigonometry, or MAT 131 - Algebra/Trigonometry I, or MAT 134 - Trigonometry. Introduces the basic concepts of mechanics including force and torque, linear and rotational motion, work, energy and power, simple machines, fluids, and the physics of heat.

**4 Credits****PHY 102 Physics II**

Prerequisites: PHY 101 - Physics I. Introduces the physics of light, periodic and wave motion, electricity and magnetism, and concepts of modern and current physics.

**3 Credits****SCI 111 Physical Science**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 80-100) and MAT 050 - Basic Algebra. Introduces physical concepts and theories pertaining to current applications and trends in physics, chemistry, earth science and astronomy. Emphasizes concepts and factual knowledge.

## Basic Skills Advancement Courses

### English as a Second Language (ESL) Courses

**3 Credits****ENG 001 Elementary English as a Second Language**

Prerequisites: Demonstrated ability to write and understand simple statements and questions on familiar topics. The suggested range on the English Placement Test is 16-35. Emphasizes writing elementary statements, reading and understanding elementary materials and expanding competence in speaking and listening.

**3 Credits****ENG 002 Intermediate English as a Second Language**

Prerequisites: Demonstrated intermediate competency in English with ability to read, write, and speak with control of basic language structures. The suggested range on the English Placement Test is 36-54. Emphasizes writing, reading and speaking with increasing competence in academic and social situations.

**3 Credits****ENG 003 Pre-Academic English as a Second Language**

Prerequisites: Demonstrated fair control of most sentence structure, expository materials, statement and conversation in social and academic settings. The suggested range on the English Placement Test is 55-65. Emphasizes paragraph organization, reading and understanding expository and academic materials through vocabulary development. Develops comprehension of social and academic conversations and lectures.

**3 Credits****ENG 004 Academic English as a Second Language**

Prerequisites: Demonstrated ability to write with some ease, understand expository academic reading material, understand lectures and converse in academic and social situations. The suggested range on the English Placement Test is 66-84. Emphasizes organization of expository writing, finding main ideas and details in academic texts and understanding and speaking in academic settings.

**3 Credits****ENG 010 English As A Second Language - Reading I**

Prerequisites: CASAS/IRCA Pre-enrollment Appraisal. Develops basic reading skills in English using texts on subjects relating to American culture. Emphasizes vocabulary acquisition, dictionary use, reading strategies for basic comprehension and interpretation. Uses collaborative technique of student interaction.

**3 Credits****ENG 011 English As A Second Language - Reading II**

Prerequisites: Level I ESL Reading Mastery. Stresses comprehension skills using texts which focus on American cultural values. Focuses on vocabulary expansion, comprehension and interpretation strategies, and experience with various forms of reading material.

**3 Credits****ENG 012 English As A Second Language - Reading III**

Prerequisites: ENG 011 - English As A Second Language - Reading II. Stresses comprehension skills and reading strategies for academic materials. Focuses on vocabulary expansion, transitional development, theme development and critical analysis of academic writing. Allows for practice in increased reading proficiency.

**ENG 013 English As a Second Language - Listening/Speaking 1****3 Credits**

Prerequisites: CASAS/IRCA Pre-Enrollment Appraisal. Focuses on listening and speaking strategies for comprehensible input. Provides practice recognizing and producing speech patterns of American English. Allows for conversational practice on topics of cultural values and behaviors.

**ENG 014 English As A Second Language - Listening/Speaking II****3 Credits**

Prerequisites: Level I ESL Listening/Speaking Mastery. Provides practice in recognizing and producing speech patterns of American English. Allows for conversational practice with emphasis on cross-cultural values and behaviors and the use of idioms.

**ENG 015 English As A Second Language - Listening/Speaking III****3 Credits**

Prerequisites: ENG 014 - English As A Second Language - Listening/Speaking II. Provides experience in recognizing and producing speech patterns of American English. Allows for conversational practice relating to academic and cultural subjects with an emphasis on critical thinking skills expressed verbally.

**ENG 016 English As A Second Language - Grammar/Structure I****3 Credits**

Prerequisites: CASAS/IRCA Pre-enrollment Appraisal. Focuses on the acquisition of basic patterns of structure and syntax for controlled communication. Emphasis is on the form, meaning and usage of basic structures in American English, providing practice through extensive and varied communicative activities.

**ENG 017 English As A Second Language - Grammar/Structure II****3 Credits**

Prerequisites: Level I ESL Grammar/Structure Mastery. Focuses on the study of patterns of more advanced structure and syntax. Emphasis is on the acquisition of sentence structure for verbal and written communication of the relationship of ideas.

**ENG 018 English As A Second Language - Grammar/Structure III****3 Credits**

Prerequisites: ENG 017 - English As A Second Language - Grammar/Structure II. Focuses on the acquisition of more advanced patterns of structure and syntax. Emphasis is on the development of competent verbal and written expression in critical analysis for academic purposes.

**ENG 019 English As A Second Language - Writing I****3 Credits**

Prerequisites: CASAS/IRCA Pre-enrollment Appraisal. Focuses on conventions for basic written communication in English emphasizing sentence construction and paragraph development. Uses writing strategies to produce coherent expression in journals, free writing exercises, paragraphing and short essays. Student collaboration is a part of the learned writing process.

**ENG 020 English As A Second Language - Writing II****3 Credits**

Prerequisites: Level ESL Writing Mastery. Focuses on techniques of written communication for coherent expression of ideas through paragraph development and essay writing. Emphasizes the writing process using strategies of revision and editing through peer collaboration. Stresses the structure and syntax of written expression for effective communication.

**ENG 021 English As A Second Language - Writing III****3 Credits**

Prerequisites: ENG 020 - English As A Second Language - Writing II. Focuses on techniques of written communication for the analysis and elaboration of academic material through paragraph and essay writing. Emphasizes the strategies of the writing process through rhetorical modes of composition for varied purposes. Extensive use of structure and syntax for thoroughly coherent expression.

## Language Arts

**ENG 007 Spelling****3 Credits**

Prerequisites: None. Improves basic spelling competencies through practice and attention to spelling rules and exceptions.

**ENG 024 Introduction to College Writing I****3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment (ASSET 32-37, COMPASS 23-51). Enables the beginning college writer to develop control of the writing process through writings which are focused, organized and well developed. Requires students to demonstrate proficiency in basic standard writing conventions including grammar and mechanics.

**ENG 025 Introduction to College Writing II****3 Credits**

Prerequisites: Successful completion of ENG 024 - Introduction to College Writing I or demonstrated competency through appropriate assessment (ASSET 38-40, COMPASS 52-69). Builds on the competencies learned in ENG 024 - Introduction to College Writing I and prepares students for entry into English 111 - English Composition. Enables beginning college writers to expand control of the writing process through writings which are focused, organized and well developed. Requires students to demonstrate increased proficiency in the use of standard writing conventions.

**ENG 028 Vocabulary Building****1 Credit**

Prerequisites: None. Focuses on developing general English vocabulary. Includes dictionary skills, context skill and work structure analysis.

**ENG 031 Reading Strategies for College I****3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment (ASSET 32-35, COMPASS 44-65). Increases performance in reading comprehension, vocabulary and flexibility. Introduces critical reading skills and study strategies.

**ENG 032 Reading Strategies for College II****3 Credits**

Prerequisites: Successful completion of ENG 031 - Reading Strategies for College I or demonstrated competency through appropriate assessment (ASSET 37-39, COMPASS 66-79). Enhances performance in reading flexibility, vocabulary and comprehension beyond the level of ENG 031 - Reading Strategies for College I. Emphasizes critical reading and strategies for effective study.

**Mathematics****MAT 044 Mathematics****3 Credits**

Prerequisites: Demonstrated competency on the numerical skills section of the assessment (ASSET 32-40, COMPASS 19-43). Reviews fractions and decimals. Concentrates on ratio, proportion, percents, measurement, signed numbers, equations and their applications.

**MAT 050 Basic Algebra****3 Credits**

Prerequisites: Successful completion of MAT 044 - Mathematics or demonstrated competency through appropriate assessment (numerical skills section - ASSET 41+, COMPASS 44-100), (pre-algebra section - ASSET 23-38, COMPASS 0-40). Reviews signed numbers and simple equation solving. Concentrates on integer exponents, scientific notation, linear and literal equations, polynomial operations, polynomial factoring, and graphing skills in preparation for MAT 111 - Intermediate Algebra or MAT 112 - Functional Mathematics.

**Life and Physical Sciences****CHM 061 Basic Chemistry****3 Credits**

Prerequisites: Successful completion of ENG 032 - Reading Strategies for College II and MAT 050 - Basic Algebra, or demonstrated competency in the reading section (ASSET 41+, COMPASS 80-100) and the algebra section (ASSET 40-55, COMPASS 41-100) of the assessment. Provides students with an introduction to chemistry basics. Provides instruction for students with little or no recent chemistry background, especially those desiring to continue in more advanced chemistry courses or other science courses.

**BIO 065 Basic Life Sciences****3 Credits**

Prerequisites: Success completion of ENG 031 - Reading Strategies for College I, and MAT 044 - Mathematics or demonstrated competency on reading section (ASSET 37+, COMPASS 66+) and mathematics section (ASSET 41+, COMPASS 44-100) of the assessment. Introduces the scientific method and basic concepts and terminology used in biology, microbiology, anatomy, physiology and organic chemistry which are related to life sciences. Prepares entering students who took no high school science or who took science several years ago for general education life sciences courses.

**College Orientation****IVY 070 College and Life Success Skills****3 Credits**

Prerequisites: Minimum entry assessment at the ENG 024 - Introduction to College Writing I (ASSET 32-37, COMPASS 23-51) and ENG 031 - Reading Strategies for College I level (ASSET 32-35, COMPASS 44-65). Enhances success in college by assisting students in obtaining skills necessary to reach their educational, career and life objectives. Topics include time management, memory techniques, reading techniques, note taking, test taking, problem solving and decision making, group interaction and resource utilization.

**IVY 071 Study Skills Survey****1 Credit**

Prerequisites: Minimum entry assessment at the ENG 024 - Introduction to College Writing I (ASSET 32-37, COMPASS 23-51) and ENG 031 - Reading Strategies for College I level (ASSET 32-35, COMPASS 44-65). Increases success in college by assisting students in obtaining skills necessary to reach their educational objectives. Students will learn effective strategies for studying for tests, dealing with test anxiety, answering a variety of types of test questions (multiple choice, true/false, matching, short answer and essay) and analyzing test results. Students also will learn time management techniques, memory strategies, textbook reading and notetaking methods.

**IVY 072 Research Strategies****1 Credit**

Prerequisites: Minimum entry assessment at the ENG 024 - Introduction to College Writing I (ASSET 32-37, COMPASS 23-51) and ENG 031 - Reading Strategies for College I level (ASSET 32-35, COMPASS 44-65). Increases success in college by assisting students in obtaining skills necessary to reach their educational objectives, specifically in the area of information literacy. In this course students will learn how to use a variety of research tool including CD-ROM databases, the Internet and other research tools. Students will learn how to use the MLA or APA documentation when summarizing, paraphrasing and quoting resources. Students will also be exposed to some of the basic issues concerning informational integrity.

**IVY 073 Styles of Learning****1 Credit**

Prerequisites: Minimum entry assessment at the ENG 024 - Introduction to College Writing I (ASSET 32-37, COMPASS 23-51) and ENG 031 - Reading Strategies for College I level (ASSET 32-35, COMPASS 44-65). Increases success in college by assisting students in obtaining skills necessary to reach their educational objectives. The course presents a holistic, integrated, principle-centered approach for solving academic challenges. This course is a step-by-step learning process which provides effective tools that help students adapt to change.

**PHL 071 Critical Thinking****3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency on the writing section (ASSET 41+, COMPASS 70-100) and the reading section (ASSET 41+, COMPASS 80-100) of the assessment. Assists students in developing critical thinking strategies with academic and workplace applications.

**OAD 019 Keyboarding****3 Credits**

Prerequisites: None. Provides students with the fundamentals of keyboarding using the touch method. Emphasizes mastery of the keyboard, development of speed and accuracy.

**OAD 029 Speed and Accuracy Development****1 Credit**

Prerequisites: OAD 019 - Keyboarding. Designed to diagnose individual keyboarding speed and accuracy skills and bring those skills to an employable level.

# IVY TECH STATE COLLEGE — VINCENNES UNIVERSITY

## GENERAL EDUCATION COURSE EQUIVALENCY & PREREQUISITES MATRIX

TISC COURSE NUMBER	IVTC COURSE TITLE	VU COURSE NUMBER	VU COURSE TITLE	PREREQUISITES				COREQUISITES
				ASSET	COMPASS	Course	Course	
<b>COMMUNICATIONS</b>								
COM 101	Fundamentals of Public Speaking	HSS 143	Speech	41+ 41+	70+ 80+	ENG 025	ENG 032	
COM 102	Intro to Interpersonal Communication	HSS 148	Interpersonal Communication	41+ 41+	70+ 80+	ENG 025	ENG 032	
ENG 111	English Composition	HEW 101	English Composition I	41+ 41+	70+ 80+	ENG 025	ENG 032	
ENG 112	Exposition & Persuasion	HEW 102	English Composition II			ENG 111		
ENG 211	Technical Writing	HEW 108	Technical Writing			ENG 111		
<b>HUMANITIES</b>								
ARH 101	Survey of Art & Culture I	AHI 130	Art History I—Pre-history to 1500	41+ 41+	70+ 80+	ENG 025	ENG 032	
ARH 102	Survey of Art & Culture II	AHI 131	Art History II—1500 to Present	41+ 41+	70+ 80+	ENG 025	ENG 032	
HSY 101	Survey of American History I	AHI 139	American History I	41+ 41+	70+ 80+	ENG 025	ENG 032	
HSY 102	Survey of American History II	AHI 140	American History II	41+ 41+	70+ 80+	ENG 025	ENG 032	
PHL 101	Intro to Philosophy	HPP 111	Intro to Philosophy			ENG 111		
PHL 102	Intro to Ethics	HPP 212	Intro to Ethics			ENG 111		
AHI 235	World Civilization I	AHI 235	World Civilization I	41+ 41+	70+ 80+	ENG 025	ENG 032	
AHI 236	World Civilization II	AHI 236	World Civilization II	41+ 41+	70+ 80+	ENG 025	ENG 032	
HAH 110	Art Appreciation	HAH 110	Art Appreciation	41+ 41+	70+ 80+	ENG 025	ENG 032	
HEL 220	Introduction to World Literature I	HEL 220	Introduction to World Literature I			ENG 111		
HEL 221	Introduction to World Literature II	HEL 221	Introduction to World Literature II			ENG 111		
HEL 222	American Literature I	HEL 222	American Literature I	41+ 41+	70+ 80+	ENG 025	ENG 032	
HEL 223	American Literature II	HEL 223	American Literature II	41+ 41+	70+ 80+	ENG 025	ENG 032	
HEL 227	Introduction to World Fiction	HEL 227	Introduction to World Fiction	41+ 41+	70+ 80+	ENG 025	ENG 032	
HEL 240	Children's Literature	HEL 240	Children's Literature	41+ 41+	70+ 80+	ENG 025	ENG 032	
HEW 202	Creative Writing	HEW 202	Creative Writing			ENG 111		
HLS 100*	Conversational Spanish*	HLS 100*	Conversational Spanish*					
HLS 101	Spanish Level I	HLS 101	Spanish Level I	41+ 41+	70+ 80+	ENG 025	ENG 032	HLS 102
HLS 102	Spanish Vocabulary Level I	HLS 102	Spanish Vocabulary Level I	41+ 41+	70+ 80+	ENG 032	ENG 032	HLS 101
HLS 103	Spanish Level II	HLS 103	Spanish Level II			HLS 101/102 or advanced placement	HLS 104	HLS 103
HLS 104	Spanish Vocabulary Level II	HLS 104	Spanish Vocabulary Level II			HLS 103/104 or advanced placement	HLS 202	HLS 201
HLS 201	Spanish Level III	HLS 201	Spanish Level III			HLS 201/202 or advanced placement	HLS 204	HLS 203
HLS 202	Spanish Vocabulary Level III	HLS 202	Spanish Vocabulary Level III			HLS 201/202 or advanced placement	HLS 204	
HLS 203	Spanish Level IV	HLS 203	Spanish Level IV			HLS 201/202 or advanced placement	HLS 204	
HLS 204	Spanish Vocabulary Level IV	HLS 204	Spanish Vocabulary Level IV			HLS 201/202 or advanced placement	HLS 204	
HPP 213	Logic	HPP 213	Logic			HLS 201/202 or advanced placement	HLS 204	
HPP 220	Philosophy of Religion	HPP 220	Philosophy of Religion			HLS 201/202 or advanced placement	HLS 204	

## IVY TECH STATE COLLEGE — VINCENNES UNIVERSITY GENERAL EDUCATION COURSE EQUIVALENCY & PREREQUISITES MATRIX

ITSC COURSE NUMBER	IVTC COURSE TITLE	VU COURSE NUMBER	VU COURSE TITLE	PREREQUISITES			
				ASSET	COMPASS	Course	Course
<b>MATHEMATICS</b>							
MAT 111	Intermediate Algebra	= MAT 111	Intermediate Algebra	40+*	41-65* MAT 050		
MAT 112	Functional Mathematics	= MAT 112	Functional Mathematics	40+*	41-65* MAT 050		
MAT 115	Statistics	= MAT 115	Statistics	41+*	66+ <sup>b</sup> MAT 111 or MAT 112		
MAT 121	Geometry-Trigonometry	= MAT 121	Geometry-Trigonometry	13+ <sup>c</sup>	MAT 111 or MAT 112		
MAT 131	Algebra/Trigonometry I	= MAT 131	Algebra/Trigonometry I	**	MAT 111		
MAT 132	Algebra/Trigonometry II	= MAT 132	Algebra/Trigonometry II	41+*	MAT 131		
MAT 133	College Algebra	= MAT 133	College Algebra	41+*	MAT 111		
MAT 134	Trigonometry	= MAT 134	Trigonometry	41+*	MAT 111		
MAT 135	Finite Math	= MAT 135	Finite Math	41+*	46+ <sup>b</sup> MAT 111		
MAT 201	Brief Calculus	= SMA 115	Survey of Calculus I	46+ <sup>b</sup> MAT 121 or MAT 132	or MAT 133 or MAT 135		
<b>LIFE &amp; PHYSICAL SCIENCES</b>							
ANP 101	Anatomy & Physiology I	= SLS/SL111	Anatomy & Physiology I	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	ENG 025	ENG 032
ANP 102	Anatomy & Physiology II	= SLS/SL112	Anatomy & Physiology II	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	ENG 025	MAT 044
ANP 201	Advanced Human Physiology	= SLS elective	Life Science Elective			ANP 101	
ANP 203	Human Anatomy & Physiology I	= SLS/SL 211	Human Systems I: Anatomy & Phys.	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	ENG 025	ENG 032
ANP 204	Human Anatomy & Physiology II	= SLS/SL 212	Human Systems II: Anatomy & Phys.	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	ENG 025	MAT 044
BIO 101	Introductory Biology	= SLL 101	Introductory Biology	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	ENG 025	ENG 032
BIO 211	General Microbiology	= SLL 211	Micro. for the Health Professions I	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	ENG 025	ENG 032
BIO 212	General Microbiology II	= SLL 212	Micro. for the Health Professions II	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	BIO 211	ANP 101
CHM 101	Chemistry I	= SIC 101	Chemistry I	41+ 41+ **	70+ 80+	ENG 025	ENG 032
CHM 102	Chemistry II	= SIC 102	Chemistry II			CHM 101	
PHY 100	Technical Physics	= SPT 101	Technical Physics	41+ 41+*	70+ 80+	MAT 111	
PHY 101	Physics I	= SIP 101	Physics I	41+ 41+*	70+ 80+	MAT 121 or MAT 131 or MAT 134	
PHY 102	Physics II	= SIP 102	Physics II			PHY 101	
SCI 111	Physical Science	= SPS 101	Physical Science	41+ 41+ 40+ <sup>b</sup>	70+ 80+ 41-65* <sup>c</sup>	ENG 025	MAT 050
SES 207	World Geography***	= SES 207	World Geography	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	ENG 025	ENG 044
<b>SOCIAL SCIENCES</b>							
ECN 101	Economics Fundamentals	= AEC 100	Elements of Economics	41+ 41+ 40+ <sup>b</sup>	70+ 80+ 41-65* <sup>c</sup>	ENG 025	MAT 050
ECN 201	Principles of Macroeconomics	= AEC 202	Macroeconomics	41+ 41+ **	70+ 80+	ENG 025	ENG 032
ECN 202	Principles of Microeconomics	= AEC 201	Microeconomics	41+ 41+ **	70+ 80+	ENG 025	ENG 032
POL 101	Intro to American Govt & Politics	= APO 111	American National Government	41+ 41+	70+ 80+	ENG 025	ENG 032
PSY 101	Intro to Psychology	= APS 142	General Psychology	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	ENG 025	ENG 044

The following courses can meet specific requirements or serve as mathematics electives.

MAT 111	Intermediate Algebra	= MAT 111	Intermediate Algebra	40+*	41-65* MAT 050
MAT 112	Functional Mathematics	= MAT 112	Functional Mathematics	40+*	41-65* MAT 050
MAT 115	Statistics	= MAT 115	Statistics	41+*	66+ <sup>b</sup> MAT 111 or MAT 112
MAT 121	Geometry-Trigonometry	= MAT 121	Geometry-Trigonometry	13+ <sup>c</sup>	MAT 111 or MAT 112
MAT 131	Algebra/Trigonometry I	= MAT 131	Algebra/Trigonometry I	**	MAT 111
MAT 132	Algebra/Trigonometry II	= MAT 132	Algebra/Trigonometry II	41+*	MAT 131
MAT 133	College Algebra	= MAT 133	College Algebra	41+*	MAT 111
MAT 134	Trigonometry	= MAT 134	Trigonometry	41+*	MAT 111
MAT 135	Finite Math	= MAT 135	Finite Math	41+*	46+ <sup>b</sup> MAT 111
MAT 201	Brief Calculus	= SMA 115	Survey of Calculus I	46+ <sup>b</sup> MAT 121 or MAT 132	or MAT 133 or MAT 135

The following courses can meet specific requirements or serve as life & physical sciences electives.

SL/SL111	Anatomy & Physiology I	= SLS/SL111	Anatomy & Physiology I	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	ENG 025	ENG 032
SL/SL112	Anatomy & Physiology II	= SLS elective	Life Science Elective			ANP 101	
SL/SL 211	Human Systems I: Anatomy & Phys.	= SLS/SL 211	Human Systems I: Anatomy & Phys.	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	ENG 025	ENG 032
SL/SL 212	Human Systems II: Anatomy & Phys.	= SLS/SL 212	Human Systems II: Anatomy & Phys.	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	ENG 025	MAT 044
SLL 101	Introductory Biology	= SLL 101	Introductory Biology	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	ENG 025	ENG 032
SLL 211	Micro. for the Health Professions I	= SLL 211	Micro. for the Health Professions I	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	ENG 025	ENG 032
SLL 212	Micro. for the Health Professions II	= SLL 212	Micro. for the Health Professions II	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	BIO 211	ANP 101
SIC 101	Chemistry I	= SIC 101	Chemistry I	41+ 41+ **	70+ 80+	ENG 025	ENG 032
SIC 102	Chemistry II	= SIC 102	Chemistry II			CHM 101	
SPT 101	Technical Physics	= SPT 101	Technical Physics	41+ 41+*	70+ 80+	MAT 111	
SIP 101	Physics I	= SIP 101	Physics I	41+ 41+*	70+ 80+	MAT 121 or MAT 131 or MAT 134	
SIP 102	Physics II	= SIP 102	Physics II			PHY 101	
SPS 101	Physical Science	= SPS 101	Physical Science	41+ 41+ 40+ <sup>b</sup>	70+ 80+ 41-65* <sup>c</sup>	ENG 025	MAT 050
SES 207	World Geography***	= SES 207	World Geography	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	ENG 025	ENG 044

The following courses can meet specific requirements or serve as social sciences electives.

AEC 100	Elements of Economics	= AEC 100	Elements of Economics	41+ 41+ 40+ <sup>b</sup>	70+ 80+ 41-65* <sup>c</sup>	ENG 025	MAT 050
AEC 202	Macroeconomics	= AEC 202	Macroeconomics	41+ 41+ **	70+ 80+	ENG 025	ENG 032
AEC 201	Microeconomics	= AEC 201	Microeconomics	41+ 41+ **	70+ 80+	ENG 025	ENG 032
APO 111	American National Government	= APO 111	American National Government	41+ 41+	70+ 80+	ENG 025	ENG 032
APS 142	General Psychology	= APS 142	General Psychology	41+ 41+ 41+*	70+ 80+ 44+ <sup>c</sup>	ENG 025	ENG 044

# IVY TECH STATE COLLEGE — VINCENNES UNIVERSITY GENERAL EDUCATION COURSE EQUIVALENCE & PREREQUISITES MATRIX

## PREREQUISITES

ITSC COURSE NUMBER	VU COURSE NUMBER	VU COURSE TITLE
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### SOCIAL SCIENCES (continued)

PSY 201	Lifespan Development	= APS 201 Developmental Psychology
PSY 205	Abnormal Psychology	= APS 249 Abnormal Psychology
SOC 111	Intro to Sociology	= ASO 151 Principles of Sociology
APO 112	State & Local Government	= APC 112 State & Local Government
APO 201	Introduction to Political Science	= APC 201 Introduction to Political Science
APO 220	Public Administration	= APC 220 Public Administration
ASO 154	Cultural Anthropology	= ASO 154 Cultural Anthropology
ASO 245	Cultural Diversity	= ASO 245 Cultural Diversity
ASO 252	Social Problems	= ASO 252 Social Problems
ASO 253	Introduction to Social Psychology	= ASO 253 Introduction to Social Psychology
ASO 261	Sociology of Relationships & Families	= ASO 261 Sociology of Relationships & Families

The following courses can meet specific requirements or serve as social sciences electives.

PSY 101	Writing	READING	WRITING	READING	WRITING	READING	WRITING	MATH	MATH	MATH	MATH
PSY 101	Writing	READING	WRITING	READING	WRITING	READING	WRITING	MATH	MATH	MATH	MATH
PSY 101	Writing	READING	WRITING	READING	WRITING	READING	WRITING	MATH	MATH	MATH	MATH
PSY 101	Writing	READING	WRITING	READING	WRITING	READING	WRITING	MATH	MATH	MATH	MATH
PSY 101	Writing	READING	WRITING	READING	WRITING	READING	WRITING	MATH	MATH	MATH	MATH

PSY 101 or SOC 111	PSY 101	ENG 025	ENG 032	MAT 044	ENG 025	ENG 025	ENG 032	ENG 025	ENG 025	ENG 025	ENG 032
PSY 101	Writing	READING	WRITING	READING	WRITING	READING	WRITING	MATH	MATH	MATH	MATH
PSY 101	Writing	READING	WRITING	READING	WRITING	READING	WRITING	MATH	MATH	MATH	MATH
PSY 101	Writing	READING	WRITING	READING	WRITING	READING	WRITING	MATH	MATH	MATH	MATH
PSY 101	Writing	READING	WRITING	READING	WRITING	READING	WRITING	MATH	MATH	MATH	MATH

### LEGEND:

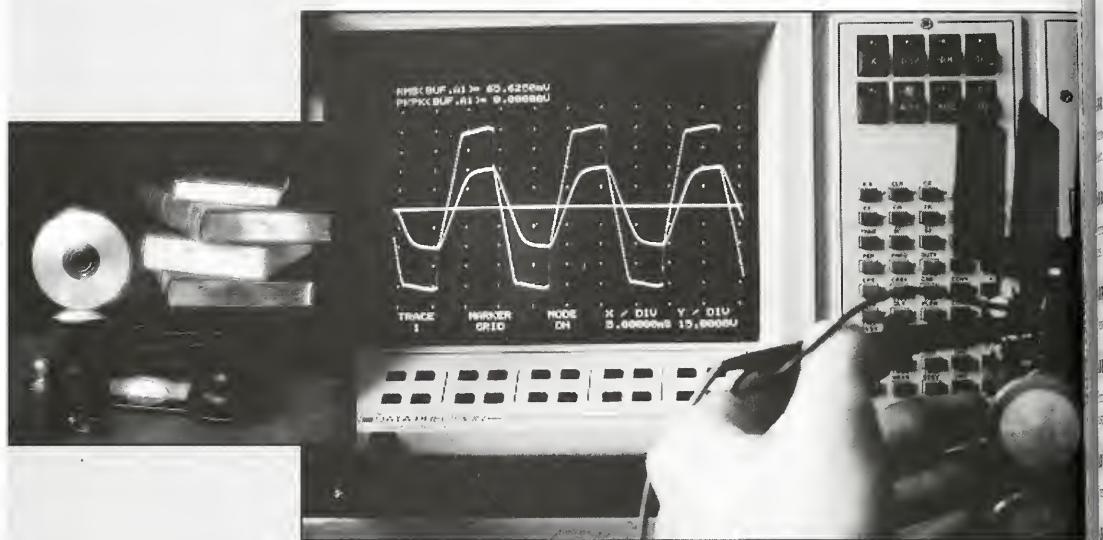
- Numerical Skills Test (ASSET)
- Elementary Algebra Test (ASSET)
- Geometry Test, Raw Score (ASSET)
- Intermediate Algebra Test (ASSET)
- College Algebra (ASSET)
- Pre-Algebra (COMPASS)
- Algebra (COMPASS)
- Trigonometry (COMPASS)

\* Limited-transfer. Transfers to Purdue and USI only as an undistributed elective. Will not fulfill the language requirement for the VU Associate of Arts.

Can be used as an undistributed elective towards a VU degree.

\*\* 40+d for B1 & B2, 41+d for C/C1 & C2

\*\*\* Does not meet science requirement for an Ivy Tech State College associate degree or technical certificate.



# Course Descriptions



# Comprehensive Technical Course Description List

(Alphabetical Order)

## **BR 101 Body Repair Fundamentals**

**3 Credits**

Prerequisites: None. Examines the characteristics of body metals and includes the installation of moldings, ornaments, and fasteners with emphasis on sheet metal analysis and safety.

## **BR 103 Auto Paint Fundamentals**

**3 Credits**

Prerequisites: None. Introduces auto paint considerations with emphasis on the handling of materials and equipment in modern automotive technologies.

## **BR 104 Collision Damage Analysis and Repair**

**3 Credits**

Prerequisites: None. Provides instruction in analyzing extensive body damage and determining the tools and procedures needed to replace panels.

## **BR 105 Conventional Frame Diagnosis and Correction**

**3 Credits**

Prerequisites: None. Covers the use of tools, frame machines and equipment for frame and chassis repair. Includes study of terms pertaining to front suspension and rear axle. Describes uses of frame gauges, tram gauges, and other measuring devices.

## **BR 106 Body Repair Applications**

**3 Credits**

Prerequisites: None. Introduces fundamentals of using hand and power tools in the repair of minor collision damage with emphasis on safety.

## **BR 107 Automotive Painting Technology**

**3 Credits**

Prerequisites: None. Provides instruction in the total refinishing of an automobile with emphasis on advanced and specialty painting techniques.

## **BR 108 Unibody Structural Analysis and Repair**

**3 Credits**

Prerequisites: None. Covers unibody repair, identification and analysis of damage, measuring and fixturing systems, straightening systems and techniques, mechanical component service, and knowledge of suspension and steering systems on front-wheel-drive unibody vehicles.

## **BR 109 Collision Damage Appraising**

**3 Credits**

Prerequisites: None. Covers uses of estimation guides, procedures for itemizing damage, abbreviations, numbers of parts, and uses of time and money conversion tables. Emphasizes damage inspection, recording on estimate sheets, and the calculation of costs.

## **ABR 110 Auto Body Power Tools**

**3 Credits**

Prerequisites: None. Covers diagnosis of problems associated with the use of power tools in auto body work.

## **ABR 111 Auto Body Hydraulic Tools**

**3 Credits**

Prerequisites: None. Provides instruction in the selection, use and maintenance of hydraulic tools for auto body repair.

## **ABR 112 Basic Body Lab I**

**1 Credit**

Prerequisites: None. Provides students with the opportunity to develop skills and knowledge in the area of basic auto body fundamentals.

## **ABR 113 Basic Body Lab II**

**1 Credit**

Prerequisites: None. Provides students with the opportunity to develop skills and knowledge in the area of basic auto body application.

## **ABR 114 Collision Damage Lab**

**1 Credit**

Prerequisites: None. Provides opportunities to develop skills and knowledge in the area of collision damage analysis and repair.

## **ABR 115 Auto Body Circuits**

**3 Credits**

Prerequisites: None. Includes fundamentals of electrical theory, automotive components and circuits, and troubleshooting techniques. Emphasizes battery construction, function, and operation.

## **ABR 116 Suspension and Alignment for Auto Body**

**3 Credits**

Prerequisites: None. Covers suspension and steering parts of an automobile and the theory of wheel alignment and wheel balance. Provides instruction in identifying wheel alignment angles, steering wheel positioning, vehicle tracking, and wheel balancing.

**ABR 117 Auto Paint Lab****1 Credit**

Prerequisites: None. Develops auto painting skills with emphasis on materials and equipment handling.

**ABR 118 Automotive Upholstery****2 Credits**

Prerequisites: None. Covers techniques of automobile interior refinishing. Includes study of spring construction, filling, and fabrics. Develops manipulation skills through practice projects on seats, panels, and armrests.

**ABR 119 Glass Installation****3 Credits**

Prerequisites: None. Examines different types of automobile glass and their uses. Includes removal and installation of front and rear glass. Covers installing and adjusting side glass, bonding, rear-view mirror support, and use of rubber channel and synthetic rubber adhesive.

**ABR 120 Fiberglass Plastic Repair****3 Credits**

Prerequisites: None. Introduces types of fiberglass and plastic materials used in auto body repair. Covers both interior and exterior applications.

**ABR 121 Unibody Repair Lab****1 Credit**

Prerequisites: None. Develops skills and knowledge in the area of unibody structural analysis and repairs.

**ABR 122 Conventional Frame and Unibody Structural Analysis, Diagnosis, and Repair****3 Credits**

Prerequisites: None. Includes the use of tools, frame machines and equipment for frame and chassis repair. Includes study of terms pertaining to front suspension and rear axle. Describes the uses of frame gauges, tram identification and other measuring devices. Unibody repair emphasizes identification and analysis of damage, measuring and fixturing systems, straightening systems and techniques, mechanical component service, and knowledge of suspension and steering systems on front wheel drive unibody vehicles.

**ACC 101 Principles of Accounting I****3 Credits**

Prerequisites: ENG 025 - Introduction to College Writing II, ENG 032 - Reading Strategies for College II, MAT 044 - Mathematics, or demonstrated competencies. Introduces the fundamental principles, techniques, and tools of accounting. Presents the mechanics of the accounting cycle including collecting, recording, summarizing, analyzing, and reporting information pertaining to service and mercantile enterprises. Covers internal control, deferred charges, notes and interest, valuation of receivables, payrolls, inventories, and plant assets.

**ACC 102 Principles of Accounting II****3 Credits**

Prerequisites: ACC 101 - Principles of Accounting I. Continues the study of accounting to include partnership and corporate accounting systems. Covers preparation and analysis of financial statements and long-term liabilities and investments. Introduces cost, managerial, branch, and nonprofit accounting techniques.

**ACC 105 Income Tax I****3 Credits**

Prerequisites: ACC 101 - Principles of Accounting I (or) with program advisor approval. Offers an overview of federal and state income tax law for individuals including taxable income, capital gains and losses, adjustments, standard and itemized deductions, tax credits and appropriate tax forms. Introduces tax concepts needed by a sole proprietorship.

**ACC 106 Payroll Accounting****3 Credits**

Prerequisites: ACC 101 - Principles of Accounting I. Covers payroll calculating and reporting including various federal and state withholding taxes, employer payroll taxes, typical insurance and other arrangements affecting the preparation of payroll registers, and employees' earnings records. Includes computerized payroll.

**ACC 107 Accounting for Recordkeeping****3 Credits**

Prerequisites: None. Provides instruction for non-accounting majors, with special emphasis on the trade professions. Covers the cash basis of recordkeeping for materials, payroll, depreciation, and financial statements. Introduces the operation of petty cash funds, basic cash budgeting, and controlling cash through the use of a checkbook. Covers financial ratios, construction accounting methods and computing customer estimates.

**ACC 108 Career Essentials of Accounting****3 Credits**

Prerequisites: None. Introduces the basic principles of accounting as utilized in a variety of office settings. Includes the principles of debit and credit, double-entry bookkeeping, use of journals and analyzing transactions. Covers uses of ledgers, posting procedures, petty cash, banking procedures, payroll, depreciation, work sheets, balance sheets and income statements.

**ACC 109 Personal Finance****3 Credits**

Prerequisites: None. Examines the process of setting and achieving financial goals. Emphasizes managing financial resources, budgeting for current expenses, projecting cash flow, and managing short- and long-term credit. Includes use of insurance to reduce risks and vehicles for saving and investing.

**ACC 111 Accounting Principles Lab I****1 Credit**

Prerequisites: Enrollment in ACC 101 - Principles of Accounting I (or) with program Advisor approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in the Principles of Accounting I course. Introduces the touch-method of numeric input on a calculator and includes computerized problems.

**ACC 112 Accounting Principles Lab II****1 Credit**

Prerequisites: Enrollment in ACC 102 - Principles of Accounting II (or) with program Advisor approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in the Principles of Accounting II course. Uses computerized problems.

**ACC 113 Income Tax Lab****1 Credit**

Prerequisites: Enrollment in ACC 105 - Income Tax I (or) with program Advisor approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in the Income Tax I course. Uses computerized problems.

**ACC 114 Payroll Accounting Lab****1 Credit**

Prerequisites: Enrollment in ACC 106 - Payroll Accounting (or) with program Advisor approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in the Payroll Accounting course. Uses computerized problems.

**ACC 118 Financial Concepts for Accounting****3 Credits**

Prerequisites: None. Develops math skills needed in the business field and serves as a basis for course work in business. Includes the study of business applications using rational numbers, algebraic equations, time value of money concepts and basic statistics.

**ACC 201 Intermediate Accounting I****3 Credits**

Prerequisites: ACC 102 - Principles of Accounting II. Studies accounting principles and applications at an intermediate level pertaining to the income statement and balance sheet, cash and short-term investments, receivables, inventories, plant assets and intangible assets, current and contingent liabilities, corrections of errors and statement of cash flows. Includes analysis of bad debts, inventory valuation, repairs and maintenance, depreciation of plant assets, and present value applications.

**ACC 202 Intermediate Accounting II****3 Credits**

Prerequisites: ACC 201 - Intermediate Accounting I. Continues studies of Intermediate Accounting I. Includes investments, long-term debt, stockholders' equity, special accounting problems and analysis, statement of cash flows and financial statement analysis. Also includes corporate capital and treasury stock transactions, dividends, earnings per share, accounting for income taxes, correction of errors and creation of financial statements from incomplete records.

**ACC 203 Cost Accounting I****3 Credits**

Prerequisites: ACC 102 - Principles of Accounting II. Examines the manufacturing process in relation to the accumulation of specific costs of manufactured products. Studies various cost accounting report forms, material, labor control and allocation of manufacturing costs to jobs and departments.

**ACC 204 Cost Accounting II****3 Credits**

Prerequisites: ACC 203 - Cost Accounting I. Continues Cost Accounting I. Studies the master or comprehensive budget, flexible budgeting and capital budgeting. Emphasizes tools for decision making and analysis. Introduces human resource accounting.

**ACC 205 Seminar in Accounting****1 Credit**

Prerequisites: Program advisor approval. Allows accounting students an opportunity to pursue specific areas of interest at a more advanced level in accounting.

**ACC 206 Managerial Accounting****3 Credits**

Prerequisites: ACC 101 - Principles of Accounting I. Provides an understanding of accounting records and management decision making, with topics including internal accounting records and quantitative business analysis.

**ACC 207 Accounting for Government and Nonprofit Entities****3 Credits**

Prerequisites: ACC 101 - Principles of Accounting I (or) with program Advisor approval. Emphasizes the similarities and differences between government, nonprofit and commercial accounting methods and procedures. Exposes students to the basic fund accounting cycle for the general fund and other special funds.

**ACC 208 Income Tax II****3 Credits**

Prerequisites: ACC 105 - Income Tax I. Continues Income Tax I. Studies procedures and problems pertaining to federal and state income tax laws for partnerships and corporations. Includes a review and in-depth study of concepts related to proprietorships covered in Income Tax I.

**ACC 209 Auditing****3 Credits**

Prerequisites: ACC 201 - Intermediate Accounting I. Covers public accounting organization and operation including internal control, internal and external auditing, verification and testing of the balance sheet and operating accounts and the auditor's report of opinion of the financial statements.

**ACC 210 Money and Banking****3 Credits**

Prerequisites: None. Studies monetary and banking theories as they relate to present-day domestic and international problems. Topics include banking operations, price changes, international monetary relationships and application of monetary and fiscal policy.

**ACC 212 Business Finance****3 Credits**

Prerequisites: None. Introduces basic tools and techniques of financial analysis and management and sources of financial and economic theory as applied to business finance. Includes conceptual materials related to valuation, capital structure formulation and risk-return consideration.

**ACC 217 Intermediate Accounting Lab I****1 Credit**

Prerequisites: Enrollment in ACC 201 - Intermediate Accounting I (or) with program Advisor approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in Intermediate Accounting I. Uses computerized problems.

**ACC 218 Intermediate Accounting Lab II****1 Credit**

Prerequisites: Enrollment in ACC 202 - Intermediate Accounting II (or) with program Advisor approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in Intermediate Accounting II. Uses computerized problems.

**ACC 219 Cost Accounting Lab****1 Credit**

Prerequisites: Enrollment in ACC 203 - Cost Accounting I (or) with program Advisor approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in Cost Accounting I. Uses computerized problems.

**ACC 220 Special Applications Lab I****1 Credit**

Prerequisites: Program advisor approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in an accounting course. Uses computerized problems.

**ACC 221 Special Applications Lab II****1 Credit**

Prerequisites: Program advisor approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in an accounting course. Uses computerized problems.

**ACC 222 Accounting Software Applications****3 Credits**

Prerequisites: ACC 102 - Principles of Accounting II. Solves accounting problems using software similar to what is currently used in business. Includes installation, operation and analysis of an accounting software package.

**ACC 223 Advanced Topics in Accounting****3 Credits**

Prerequisites: Program advisor approval. Discusses topics of current interest in accounting. Focuses on special interest projects for students in accounting. Includes trips, guest speakers, audio-visual activities and seminars.

**ACC 225 Integrated Accounting Software****3 Credits**

Prerequisites: ENG 111 - English Composition, MAT 111 - Intermediate Algebra or equivalent or advisor approval, ACC 201 - Intermediate Accounting I, ACC 203 - Cost Accounting, OAD 218 - Spreadsheets or corequisite with advisor approval. Integrated accounting software package(s) will be used to illustrate computerized accounting practices. The general ledger will be integrated with accounts receivable, accounts payable and other accounting modules.

**ACC 280 Co-op/Internship****1-6 Credits**

Prerequisites: Departmental approval. Provides the opportunity to work at a job site specifically related to a student's career objectives. Provides on-the-job experience while earning credit toward an associate degree.

**ACC 281-294 Special Topics in Accounting****1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**ACC 298 Field Study/Cooperative Education****3 Credits**

Prerequisites: Must be enrolled in an Associate Degree Program. Must have permission from a Program Supervisor. The student works at a job site that is specifically related to his/her career objectives. The course is a field project within the framework of actual work experience in accounting.

**AFS 101 Fire Technology****3 Credits**

Prerequisites: None. Examines the history of firefighting, identifies the types of apparatus and fire protection systems and analyzes the fire problem in general. Provides a basis for the chemical and hazardous properties of combustion and the related by-products.

**AFS 102 Fire Apparatus and Equipment****3 Credits**

Prerequisites: None. Examines in detail the types of apparatus in use today. Studies pumper, aerials, elevating platforms and special apparatus. Utilizes National Fire Protection Association standards in identifying the proper responses for a given situation. Includes study of apparatus placement on an emergency incident, types of pumps, tests, equipment, drafting, relay, nozzles, fittings and hose lays and maintenance on various types of apparatus.

**AFS 103 Firefighting Strategy and Tactics****3 Credits**

Prerequisites: None. Prepares the student to make responsible decisions concerning fireground strategies and tactics at the company level. Uses various priority scenarios, including preparing for incident command and commanding the initial response. Emphasizes company operations with basic command decisions.

**AFS 104 Building Construction Fire Service****3 Credits**

Prerequisites: None. Examines the design principles involved in the protection of a structure from fire involvement. Studies the signs, symptoms and indicators of partial or total building collapse during firefighting operations. Includes the study of legislative codes and laws concerning building design, building fire safety, classification of building construction and blueprint reading.

**AFS 105 Fire/Arson Investigation****3 Credits**

Prerequisites: None. Focuses on the responsibilities of the firefighter, the investigator and the department in fire scene investigations, fire cause and loss, collection and preservation of evidence and determination of fire origin. Emphasizes the application and assistance of various scientific aids that assist in the investigation.

**AFS 108 Fire Prevention/Inspection****3 Credits**

Prerequisites: None. Examines the function of the fire inspector and the organization of the fire prevention unit. Emphasizes identifying codes and regulations utilized by the inspector with particular use of the Indiana Fire Code. Includes the legal authority of fire prevention principles, application of the fire code and sound management principles as applied to a bureau.

**AFS 109 Fire Department Specifications****3 Credits**

Prerequisites: None. Surveys specifications of firefighting apparatus, equipment, protective clothing, facilities and all other sources of materials necessary to a fire department. Study includes the writing of Standard Operating Guides (SOGs) and blueprint readings.

**AFS 201 Fire Protection Systems****3 Credits**

Prerequisites: None. Provides a general introduction to fire alarm monitoring devices and extinguishing systems. Develops a strong base for fire protection or commercial applications. Covers fire extinguishing agents, portable fire extinguishers, carbon dioxide systems, dry chemical systems, halogenated systems/foam systems, explosive suppression systems, thermal/smoke/flame detection systems and building monitoring systems. Covers standpipe and sprinkler systems.

**AFS 202 Fire Service Management****3 Credits**

Prerequisites: None. Studies the principles and functions of administrative and management personnel in the fire service. Topics discussed include departmental organizations, administrative and management procedures, personnel selection, line and staff functions, communications, the fire company unit, public relations and current problems in administration.

**AFS 204 Fire Service Hydraulics****3 Credits**

Prerequisites: None. Studies compressible fluids including fluid properties, principles of fluid statics, flow system principles, pipe friction and head loss, flow measurements, pumps and other appliances and hydraulic devices. Relates applications to fire protection, water supply and foam systems.

**AFS 205 Aircraft Firefighting****3 Credits**

Prerequisites: None. Examines the hazards associated with aircraft firefighting. Includes lecture and practical use of airport firefighting equipment, extinguishing agents, strategy and tactics, rescue methods and aircraft design and construction.

**AFS 208 Industrial Fire Loss Prevention****3 Credits**

Prerequisites: None. Provides students with a comprehensive study of industrial fire loss prevention and control management programs. Includes procedures for fire risk and loss control, standards and specifications for equipment, laws, codes, regulations, organization of fire brigades and administrative control of industrial operation.

**AFS 209 Fireground Management****3 Credits**

Prerequisites: None. Emphasizes the command and control of fire department major operations at an advanced level. Links operations and safety Studies pre-incident preparation, size-up, incident command systems and incident management with large role-playing incident scenarios for students to solve.

**AMT 102 Introduction to Robotics****3 Credits**

Prerequisites: TEC 104 – Computer Fundamentals for Technology. Introduces students to robotics and automated systems and their operating characteristics. Covers robotics principles of operation and work envelopes. Teaches coordinate systems and how hydraulic, pneumatic and electromechanical systems function together as a system. Covers servo and non-servo controls, system capabilities and limitations and safety. Investigates robot tooling, including welders, grippers, magnetic pickups, vacuum pickups, compliance devices, adhesive applicators and paint sprayers.

**AMT 201 Manufacturing Systems Control (PLCs)****3 Credits**

Prerequisites: TEC 104 – Computer Fundamentals for Technology and TEC 113 – Basic Electricity or advisor approval. Introduces the field of industrial controls. Teaches principles of control systems and how they are applied to a production system to achieve automation. Systems included in the course are stepper motors, programmable logic controllers, microprocessors, computers and feedback systems. Emphasizes programmable logic controllers and the local area network.

**AMT 202 Work Cell Design and Integration****3 Credits**

Corequisites: AMT 102 – Introduction to Robotics, AMT 201 – Manufacturing Systems Control (PLCs). Studies principles pertaining to design and implementation of robots in industrial work cells. Emphasizes selection of the best work site and robot system, application of cell sensor, development of cycle times, economic analysis, safety considerations, proposal preparation and human resources development.

**AMT 203 Automation Electronics****3 Credits**

Prerequisites: TEC 113 – Basic Electricity, MAT 111 – Intermediate Algebra or MAT 131 – Algebra/Trigonometry I. Demonstrates the operation and application of electronic devices in the automation field. Includes linear integrated circuits, sensors and interfacing systems, actuators and drive controls and process control techniques.

**AMT 204 Automation Management****3 Credits**

Prerequisites: Advisor approval. Covers basic principles and applications for planning and controlling production operations and improvement programs. Includes system characteristics and solutions for production process and service operation problems; methods analysis; cost estimating; facilities planning, tooling and services acquisition and maintenance; production, project and program scheduling; materials and inventory management; safety and loss prevention; decision-making tools and evaluation of alternatives.

**AMT 205 Automated Manufacturing Systems****3 Credits**

Prerequisites: AMT 201 – Manufacturing Systems Control (PLCs), AMT 203 – Automation Electronics. Provides instruction in selecting equipment, writing specifications, designing fixtures and interconnects, integrating systems, providing interfaces and making the assigned systems operational to produce “marketable” products.

**AMT 206 Advanced Manufacturing Systems Control****3 Credits**

Prerequisites: AMT 201 - Manufacturing Systems Control (PLCs). Provides an in-depth study of programmable controllers. Emphasizes program language installation, maintenance and applications.

**AMV 101 Chassis and Suspension Principles****3 Credits**

Prerequisites: None. Describes various frame designs and suspension systems used in modern vehicles. Includes repair and replacement of steering linkages and chassis components, both front and rear.

**AMV 107 Engine Principles and Design****3 Credits**

Prerequisites: None. Examines engine dynamics, theory of engine operation and design characteristics of all engine assemblies and subassemblies. Emphasizes removal, tear down, visual inspection, precision measuring inspection, clean up of components and parts and rebuilding engines according to industry standards.

**AMV 113 Electricity for Transportation****3 Credits**

Prerequisites: MAT 050 - Basic Algebra. Introduces fundamentals of electricity and electrical behavior as applied to modern transportation. Includes extensive use of digital multimeters and circuit troubleshooting. Presents an intensive study of the construction, function and principles of operation of starting motors, charging systems and their control systems with emphasis on diagnosis and bench repair.

**AMV 202 Computer Engine Controls****3 Credits**

Prerequisites: AST 106 - Electronic Ignition Systems. Examines computerized ignition, carburetor, fuel injection and sensors for engine controls on late model passenger cars. Covers theory, diagnostic procedure and repair procedure of the CCC, MCU, EEC-IV, lean burn and other spark control systems.

**AMV 280 Co-op/Internship****3 Credits**

Prerequisites: Students must have completed a minimum of 30 credits toward their degree with at least a 3.0 grade point average. Provides the opportunity to work at a job site specifically related to a student's career objectives. Provides on-the-job experience while earning credit toward an associate degree.

**AMV 281-294 Special Topics in Automotive Technology****1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**ART 111 Drawing for Visualization****3 Credits**

Prerequisites: None. Introduces students to the tools and methods of drawing. Presents drawing as a catalyst to seeing and a way of recording ideas. Gives students the necessary drawing preparation for the study of graphic design.

**ART 112 Electronic Layout****3 Credits**

Prerequisites: None. Deals with advanced issues of designing for communication. Develops creative problem solving skills. Uses the computer as a tool or executing layouts for client approval. Produces practical samples for student portfolios.

**ART 114 Graphic Design****3 Credits**

Prerequisites: VIS 101 - Fundamentals of Design. Corequisites: ART 115 - Typography. Introduces design for communication. Teaches the steps in design development and the difference between message and concept. Produces samples for student portfolios.

**ART 115 Typography****3 Credits**

Prerequisites: None. Addresses the issues pertinent to the proper and creative use of type and the enhancement of communication. Covers the history of type, typographic terminology, design, copyfitting attention to aesthetics, common sense and how we read.

**ART 116 Electronic Illustration****3 Credits**

Prerequisites: None. Provides instruction in illustration techniques using computer software designed for creating illustrations, technical drawings, logos, packaging, maps, charts and graphs. Emphasis is on preparing effective, creative illustrations for various media applications in an efficient, productive manner.

**ART 117 Production****3 Credits**

Prerequisites: Advisor approval. Focuses on the hand assembly of art and type for the printer's camera. Covers production terminology, printing process, and preparation of illustrative materials for reproduction and preparation of mechanical art using hand skills. Produces samples for student portfolios.

**ART 202 Special Projects I****3 Credits**

Prerequisites: None. Accommodates student interest in specific areas or in areas where there is a need to strengthen skills. Requires performance and completed work to be portfolio quality and reflect applicability to the main areas of the program.

**ART 203 Independent Study I****3 Credits**

Prerequisites: None. Provides students with opportunities to design projects for specific areas of interest. Requires the project plan to be approved by he instructor. Restricts work to student program area and requires it to be portfolio quality.

**ART 205 Special Projects II****3 Credits**

Prerequisites: None. Provides specific experience in selected areas. Recommends completion of two projects. Requires instructor approval for additional projects.

**ART 206 Independent Study II****3 Credits**

Prerequisites: None. Builds skills in specific areas of a visual communications program or a related program such as marketing, advertising, and externship or supervision. Requires instructor approval for program projects. Requires program chairperson's approval to elect non-program coursework.

**ART 210 Illustration Techniques I****3 Credits**

Prerequisites: None. Develops dexterity in the application of transparent and opaque media.

**ART 217 Graphic Design II****3 Credits**

Prerequisites: ART 112 - Electronic Layout. Provides experience with advanced design projects which communicate a common theme through several different media. Provides opportunity for students to work in a team environment.

**ART 218 Digital Production****3 Credits**

Prerequisites: None. Addresses issues of preparing camera-ready art electronically. Topics covered are preparing computer files for service bureau output, scanning and printing resolution, color matching and color models, trapping, and computer system operations and troubleshooting.

**AST 102 Two-/Four-Wheel Alignment****3 Credits**

Prerequisites: MAT 050 - Basic Algebra. Covers the principles of two- and four-wheel alignment and wheel balance. Emphasizes practical work experience in the lab covering all the alignment angles.

**AST 103 Automotive Electronics****3 Credits**

Prerequisites: None. Introduction to electrical theory and automotive circuits and components. Electron theory, electrical circuits, terms, wiring diagrams and batteries are emphasized. Introduces electrical circuit and component test equipment.

**AST 104 Start and Charge Systems****3 Credits**

Prerequisites: AMV 113 - Electricity for Transportation. Studies construction, function and principles of operation of starting motors, charging systems and their control systems with emphasis on diagnosis and bench repair.

**AST 105 Fuel Systems****3 Credits**

Prerequisites: AMV 113 - Electricity for Transportation. Studies automotive fuel systems: single, double, and four barrel carburetors, fuel injection systems and emission controls as they apply to the fuel system. Focuses on shop procedures for troubleshooting, servicing, replacing or overhauling fuel system and emission control components.

**AST 106 Electronic Ignition Systems****3 Credits**

Prerequisites: AMV 113 - Electricity for Transportation. Introduces basic principles of electronic ignition systems. Includes functions and testing of conventional breaker point ignitions.

**AST 108 Electrical Accessory Systems****3 Credits**

Prerequisites: AMV 113 - Electricity for Transportation. Presents the functions, construction, and principles of operation and troubleshooting techniques for the accessories of automotive vehicles. Includes electrical accessories such as windshield wipers and washers, power seats, power windows, adjustable steering wheels, power tailgates and power headlight doors.

**AST 109 Small Gas Engine Maintenance****3 Credits**

Prerequisites: None. Presents theory, service and repair of small gas engines and their components; emphasis is on safety, measurements, lubricants, fuels, and engine design.

**AST 110 Small Gas Engine Overhaul****3 Credits**

Prerequisites: None. Covers disassembly, inspection, measuring, cleaning, machine repair, and proper assembly techniques applicable to small gas engine overhaul. Includes overhaul of carburetor and ignition systems and maintenance procedures on rebuilt two-cycle and four-cycle engines.

**AST 111 Basic Auto Care****2 Credits**

Prerequisites: None. Provides basic instruction in auto maintenance for the automobile owner. Covers routine maintenance, economical operation, elimination of objectionable noises, care of interior and exterior appearance, warranty regulations and emergency road procedures.

**AST 113 Automotive Diesel and Engine Theory****3 Credits**

Prerequisites: None. Covers operation of the diesel engine and differences between a diesel and gas engine. Includes instruction on shop equipment, fuels, oils, seals, bearings, lubrication and cooling systems.

**AST 114 Service Organization and Parts****2 Credits**

Prerequisites: None. Presents facility and personnel requirements for efficiently-run parts and service departments. Emphasizes principles, practices and procedures necessary to effectively operate the departments. Includes manufacturer catalogs and component numbering systems, methods of scheduling time and techniques for obtaining maximum work efficiency from technicians and specialists.

**AST 201 Heating and Air Conditioning Principles****3 Credits**

Prerequisites: None. Provides an in-depth study of automotive air conditioning and heating. Emphasizes the operation and theory of air conditioning and its components. Includes a study of vacuum and electrical control circuits.

**AST 203 Engine Rebuild****3 Credits**

Prerequisites: AMV 107 - Engine Principles and Design. Covers precision machines, tools and equipment needed for rebuilding today's modern engine. Includes repair, proper assembly and installation techniques applicable to the modern engine.

**AST 204 Automatic Transmission/Transaxle****3 Credits**

Prerequisites: None. Deals with construction, functions and principles of operation. Emphasizes practical work experience in the lab where students overhaul automatic transmissions and transaxle assemblies.

**AST 205 Manual Transmission/Transaxle****3 Credits**

Prerequisites: None. Presents theory and overhaul procedures related to the manual transmission/transaxle, including clutches and transfer cases and diagnosis and overhaul of the manual power train.

**AST 206 Heating and Air Conditioning Service and Repair****3 Credits**

Prerequisites: AST 201 - Heating and Air Conditioning Principles. Covers diagnosis, service and repair procedures of the heating/air conditioning system. Includes replacement and overhaul procedures for components related to heating/air conditioning systems.

**AST 207 Engine Performance****3 Credits**

Prerequisites: AMV 202 - Computer Engine Controls and AST 105 - Fuel Systems. Includes advanced instruction in the theory, diagnosis and repair of computer-controlled ignition systems and fuel systems on late-model vehicles using state-of-the-art diagnostic equipment. Emphasizes recommended manufacturer methods for servicing the computer-controlled ignition system.

**AST 208 Differentials/Drivelines****3 Credits**

Prerequisites: None. Studies differential and driveline theory and overhaul. Includes overhaul and service procedures applicable to gear sets, bearings and seals. Includes theory and overhaul procedures related to the driveshaft and axle assemblies for front and rear wheel drive vehicles.

**AST 209 Automotive Braking Systems****3 Credits**

Prerequisites: None. Covers theory, service and repair of automotive braking systems and their components. Emphasizes hydraulic theory and the repair and service of booster units, master cylinder, wheel cylinder, caliper rebuilds and drum and rotor service.

**AST 210 Modified Automotive Engines****3 Credits**

Prerequisites: AST 203 - Engine Rebuild. Provides instruction for advanced transportation students and employed technicians to familiarize them with higher performance engines, durability and economy. Stresses individuality in constructing performance engines.

**AST 212 Comprehensive Diagnosis I****3 Credits**

Prerequisites: AMV 101 - Chassis and Suspension Principles, AST 201 - Heating and Air Conditioning Principles, AST 207 - Engine Performance, and AST 220 - Transaxle and Driveline Service. Provides students with the opportunity to diagnose and repair the complete automotive system according to manufacturers' recommendations and specifications. Requires students to complete repair orders assigned by the instructor.

**AST 213 Comprehensive Diagnosis II****3 Credits**

Prerequisites: AST 212 - Comprehensive Diagnosis I. Provides opportunity for students to complete work based on flat rate hours. Includes recordkeeping, parts procurement and methods for determining unpaid labor lost on flat rate.

**AST 215 ASE Certification Review****3 Credits**

Prerequisites: Advisor approval. Prepares professional automotive technicians for the National Institute for Automotive Service Excellence certification tests. Reviews all eight areas of testing and provides sample certification tests. Lectures will stress theory of operation and diagnostic logic. Labs will stress professional repair and testing techniques.

**AST 220 Transaxle and Driveline Service****3 Credits**

Prerequisites: None. Covers complete diagnostic procedures for automatic transaxles, computer shift transaxles, drive axles and shafts. Emphasizes on-car repair and removal procedures of transaxles and driveline components.

**AST 221 Driveability Diagnosis****3 Credits**

Prerequisites: AMV 113 - Electricity for Transportation, AMV 202 - Computer Engine Controls, AST 207 - Engine Performance. Develops the student's ability to diagnose and troubleshoot common and complex engine performance problems. Students are expected to utilize all available test equipment to make a complete and accurate diagnosis. Emphasis is on a systematic and logical approach to troubleshooting driveability problems.

**AST 225 Advanced Electronics****3 Credits**

Prerequisites: AMV 113 - Electricity for Transportation, AST 108 - Electrical Accessory Systems, AST 201 - Heating and Air Conditioning Principles, AST 204 - Auto Transmission/Transaxle, AST 221 - Driveability Diagnosis. Presents advanced theory and diagnosis in automotive electronic systems. Examines all major vehicle computer systems with an emphasis on the diagnosis, testing and repair of these systems.

**AVT 141 Aviation Basics I****3 Credits**

Prerequisites: MAT 111 - Intermediate Algebra. Provides familiarization with aviation drawings and blueprint reading. The student learns the proper methods to weigh various aircraft and the requirements for weight-and-balance reporting. Fabrication of fluid lines for hydraulic, oxygen and fuel systems is also covered.

**AVT 142 Aviation Basics II****3 Credits**

Prerequisites: None. This is a math and physics review course with practical applications for aviation. The student reviews basic mathematical operations, determines areas of wing platforms and volumes of fuel tanks. Ratios and proportions are discussed as they apply to wings and aircraft engines. The operation of simple machines, aircraft nomenclature and basic aerodynamics are also covered.

**AVT 144 Aircraft Electricity****4 Credits**

Prerequisites: AVT 141 - Aviation Basics I or instructor consent. Introduces the student to the principles of basic electricity. The student learns Ohm's Law and the relationships of voltage, current, resistance and power in DC electrical circuits. The relationships between RMS values of voltage and current, true and apparent power, reactance and impedance using vector algebra in AC circuits are discussed. Electrical wiring in the aircraft, probe equipment, basic troubleshooting and battery servicing are also covered.

**AVT 145 Aircraft Ground Servicing****2 Credits**

Prerequisites: None. Focuses on the proper methods and safety procedures involved in working with aircraft on the ground. The student learns identification of aircraft fuels and refueling procedures and how to properly clean, inspect and treat corrosion. Standard hand signals used with marshalling aircraft, engine run-up and taxiing procedures and ramp safety are also included.

**AVT 146 Aviation Regulations****2 Credits**

Prerequisites: None. Introduces the student to the Federal Aviation Regulations (FARs) pertaining to aviation maintenance (FAR Parts 23, 43 and 65) and the Advisory Circulars (ACs) that expand upon these regulations, and proper record keeping for maintenance tasks performed on civil aircraft. Included are the format of technical publications and the various media (paper, microfiche and CD-ROM) on which they are published.

**AVT 148 Aviation Materials and Processes****3 Credits**

Prerequisites: None. Provides an overview of aviation manufacturing and inspection methods. Introduces the student to some of the processes and the special tools used in aviation quality assurance.

**AVT 151 Introduction to Avionics****3 Credits**

Prerequisites: None. Provides an overview of the aviation electronics industry. Introduces the various job descriptions, duties, activities and processes involved in manufacturing, repairing and maintaining aircraft avionics systems.

**AVT 205 Navigation and Communications Systems****3 Credits**

Prerequisites: Completion of Technical Core. Exposes the student to correct safety practices and develops comprehensive knowledge and technical skills required to repair and maintain complex aircraft navigation and communication systems.

**AVT 206 Aviation Control Circuits****3 Credits**

Prerequisites: AVT 205 - Navigation and Communications Systems. Emphasizes advanced skills on F.C.C. and aircraft controls and circuitry. Study of autopilot, approach linkages, safety, position and warning systems and the glass cockpit are included in this course.

**AVT 222 Nonmetallic Structures****2 Credits**

Prerequisites: None. Introduces the student to inspecting and evaluating honeycomb and laminated structural damage as well as damaged transparent acrylic materials structures. The student becomes familiar with the methods involved in removing and repairing damaged honeycomb and laminated structural materials and repairing acrylic materials.

**AVT 223 Aircraft Finishes****3 Credits**

Prerequisites: None. Familiarizes the student with the process of selecting, applying and repairing fabric coverings; identifying wood defects and making repairs to wood structures. Also covered are the application of finishing materials and identification of finish defects.

**AVT 224 Aircraft Inspection****4 Credits**

Prerequisites: None. Presents the operation of these hydraulic systems: landing gear struts, aircraft brakes, steering and flaps. Students also study aircraft jacking and leveling, aircraft wheels, tires and tubes. Aircraft conformity and airworthiness inspections are also covered.

**AVT 225 Airframe Fluid Systems****4 Credits**

Prerequisites: None. Covers the proper handling and identification of hydraulic fluids; inspection of hydraulic lines and fittings and servicing troubleshooting and repairing hydraulic systems and components. Additionally, students learn about the function and operation of aircraft pressurization and cabin air distribution systems and aircraft fuel systems. Introduces the proper methods involved in inspecting and servicing oxygen systems.

**AVT 226 Airframe Electrical Systems**

Prerequisites: None. Presents the theory of operation and proper methods of inspecting, servicing, troubleshooting and repairing the various electrically powered aircraft systems. Included are power distribution systems for light and transport aircraft and power generation and regulation. Proper wiring technique and connector repair are also covered.

**AVT 227 Aircraft Sheetmetal**

Prerequisites: None. Introduces the basic techniques necessary to perform sheet metal repairs on aircraft structures. Students develop skills in these areas: using sheet metal tools, laying out parts, forming parts with bending machines and repairing various structural airframe components.

**AVT 228 Aircraft Instruments and Avionics**

Prerequisites: None. Introduces the student to aircraft instruments and the various avionic systems installed in both general aviation and transport category aircraft. Included are basic theory of operation and the regulations pertaining to maintenance of instruments and avionics.

**AVT 231 Reciprocating Powerplants**

Prerequisites: None. Covers inspection and repair of radial engines, and overhaul, inspection and removal of reciprocating engines. Students will perform a receiving inspection on an aircraft engine and perform a complete overhaul to airworthy condition.

**AVT 232 Turbine Powerplants**

Prerequisites: None. Covers the overhaul of a turbine engine, and the inspection, checking, servicing, repair and removal/installation of turbine engines. Students will perform a receiving inspection on an aircraft engine and perform a complete overhaul to airworthy condition.

**AVT 233 Powerplant Fuel and Induction Systems**

Prerequisites: None. Studies fuel metering systems in reciprocating powerplants. Air flow through turbines, superchargers and carburetors is discussed. Students overhaul carburetors to supplement theory discussions in this area. Engine cooling systems are also covered.

**AVT 234 Reciprocating Engine Ignition and Fuel Systems**

Prerequisites: None. The student overhauls magnetos and inspects and repairs ignition systems and fuel systems.

**AVT 235 Powerplant Fluid and Indicating Systems**

Prerequisites: None. Covers lubricating systems in reciprocating engines. Indicating systems and engine instruments are also covered.

**AVT 236 Turbine Starting Systems and Auxiliary Power**

Prerequisites: None. Introduces reciprocating and turbine engine electrical systems. Students will inspect, service, troubleshoot and repair turbine pneumatic starting systems and turbine ignitions.

**AVT 237 Propellers**

Prerequisites: None. Covers the inspection, repair and troubleshooting of propeller control systems. The removal, installation and balancing of propellers are also covered.

**AVT 238 Turbine Systems and Components**

Prerequisites: None. Introduces turbine engine electrical systems. Students inspect, check, troubleshoot and repair engine fire detection systems. Exhaust systems and thrust reversers are also covered.

**AVT 240 Structural Repair**

Prerequisites: None. Introduces the student to welding techniques used on aircraft. Rigging of flight controls on a fixed wing and rotary wing aircraft are also accomplished. Repair, servicing and inspection of ice and rain control and smoke carbon monoxide detection systems are also covered.

**AVT 257 Aircraft Microprocessors**

Prerequisites: Completion of Technical Core. A familiarization with computer applications in the aircraft. Students are introduced to microprocessors, volatile and non-volatile memory, machine language and how various aircraft systems are interfaced.

**AVT 260 Avionics Installation**

Prerequisites: Completion of Technical Core. The student utilizes knowledge and skills developed in previous classes to install and troubleshoot avionics systems in light aircraft. Introduces the student to bidding avionics installations and how an avionics business operates.

**BCT 102 Construction Materials**

Prerequisites: None. Develops skills in identifying building materials commonly used in modern building construction. Provides experience in the application of locally accessible materials.

**BCT 104 Floor and Wall Layout and Construction****3 Credits**

Prerequisites: None. Examines the design and construction of floor and wall systems. Develops skills needed for layout and construction of floor and wall systems from blueprints and professional planning documents.

**BCT 105 Roof Construction****3 Credits**

Prerequisites: CON 101 – Introduction to Construction Technology. Studies the design and construction of roof systems. Emphasizes use of the framing square for traditional rafter and truss roofing. Instructs students in additional up-to-date techniques.

**BCT 107 Furniture Design and Construction****3 Credits**

Prerequisites: None. Develops skills in the design, layout and construction of furniture. Introduces furniture styles, types of materials used and methods of construction.

**BCT 108 Cabinetry Fabrication Techniques****3 Credits**

Prerequisites: None. Develops skills in the design, layout and construction of cabinets. Provides opportunities for students to lay out and fabricate faceplates and cases for cabinets.

**BCT 109 Furniture Refinishing and Repair****3 Credits**

Prerequisites: None. Develops knowledge and skills in the technology of refinishing and repairing furniture. Introduces procedures used in stripping, bleaching, caning, veneering and wood fillers.

**BCT 110 Cabinetry****3 Credits**

Prerequisites: None. Introduces the basic skills and technology of cabinet making, focusing on cabinet design and layout, terminology, tools and skill requirements.

**BCT 111 Woodworking Fundamentals****3 Credits**

Prerequisites: None. Introduces the basic skills and technology of woodworking and focusing on tool and machine operations. Introduces proper joinery and material selection.

**BCT 112 Millwork****3 Credits**

Prerequisites: None. Introduces the basic skills and technology of the production of wood products and focuses on machinery set-up and operations for making moldings, door frames and picture frames.

**BCT 113 Cabinetry/Furniture Door and Drawer Assembly****3 Credits**

Prerequisites: None. Develops skills in the design, layout and construction of cabinet/furniture doors, drawers and counter tops. Introduces types of hardware and installation methods.

**BCT 114 Exterior Trim****3 Credits**

Prerequisites: None. Develops necessary skills in finishing building exteriors. Provides training in the installation of the cornice, windows, doors, and various types of sidings used in today's market place.

**BCT 115 Auxiliary Building Design and Construction****3 Credits**

Prerequisites: CON 101 – Introduction to Construction Technology. Develops carpentry skills in construction of garages, storage buildings, wood decks, patios, privacy fences and gazebos.

**BCT 201 Residential Wiring****3 Credits**

Prerequisites: TEC 113 – Basic Electricity. Covers the practice of residential wiring, including electrical service, metering equipment, lighting, switches, outlets and other common components, and methods of installation and maintenance of the residential wiring system in accordance with the current National Electrical Code.

**BCT 202 Plumbing Fundamentals****3 Credits**

Prerequisites: None. Studies the operation and function of the home plumbing system. Introduces pipe drawings and isometric pipe layout and blueprint symbols. Demonstrates how to rough in plumbing and install drainage, water systems, fixtures and water heaters in compliance with the plumbing code.

**BCT 203 Masonry Concrete Fundamentals****3 Credits**

Prerequisites: None. Covers materials and methods of construction with concrete block, brick and forming for poured concrete. Includes study in the preparation of the building site.

**BCT 205 Advanced Projects in Building Construction I****3 Credits**

Prerequisites: CON 204 – Estimating and Specifications. Applies problem solving to common problems in construction. Emphasizes the cooperation between several trades in the construction industry.

**BCT 206 Advanced Projects in Building Construction II****3 Credits**

Prerequisites: BCT 205 – Advanced Projects in Building Construction I. Applies problem solving skills to common challenges in construction. Emphasizes the cooperation between several trades in the construction industry allowing students to practice necessary skills to resolve the problem. Concentrates on decision-making skills.

**BCT 207 Carpentry—Light Commercial****3 Credits**

Prerequisites: None. Introduces carpentry skills required in light commercial construction. Focuses on construction methods and materials used for office buildings, clinics, small churches and other non-residential structures.

**BCT 210 Vinyl and Aluminum Siding Applications****3 Credits**

Prerequisites: None. Provides in-depth examination of common and unusual problems encountered by an aluminum siding applicator on new jobs and existing structures. Includes sidings, soffit, fascia, rain gutter and covering of trims and windows. Emphasizes actual installation and a wide variety of experiences. Includes standing seam and corrugated metal roofing, metal carports, awnings, metal storage buildings, ventilators and flashings.

**BCT 211 Construction Organization and Procedures****3 Credits**

Prerequisites: None. Introduces organization and management procedures focusing on subcontracting, equipment and tool inventories, job materials, codes, inspections and permits.

**BCT 213 Motors and Motor Controls****3 Credits**

Prerequisites: TEC 113 – Basic Electricity. Studies the wiring and design of motor control circuits, including circuit and conductor calculations, motor circuits and controls. Includes control transformers and service, circuit layout for motor control and machine tool hook-up and control.

**BCT 214 Wall and Floor Coverings****3 Credits**

Prerequisites: None. Covers modern materials and techniques of interior floor and wall coverings. Provides instruction on assessing the durability and maintenance of materials and techniques in correct installation procedures.

**BCT 215 Basic Theory of Paint and Stain****3 Credits**

Prerequisites: None. Introduces the basic skills and techniques of finishing wood products, including proper preparation, staining and finishing procedures.

**BCT 216 Advanced Residential Design****3 Credits**

Prerequisites: Advisor approval. Studies residential floor plans and elevation. Analyzes contemporary living patterns, cost, privacy, convenience and efficiency coordinated with needs. Compares exterior styles for cost and aesthetic values. Studies multiple housing, duplex arrangements, apartments and condominiums. Provides students with opportunities to do floor plans, elevations and perspective drawings to incorporate the conclusions reached from the above research.

**BCT 217 Plumbing Mechanical Installation****3 Credits**

Prerequisites: BCT 202 – Plumbing Fundamentals. Develops skills in the use of plumbing equipment. Covers residential and commercial installations, troubleshooting and service and repair in conformance with codes.

**BCT 218 Commercial Plumbing Installation and Estimating****3 Credits**

Prerequisites: BCT 202 – Plumbing Fundamentals. Offers in-depth study of commercial plumbing with emphasis on code requirements and commercial blueprints. Instructs in estimating the cost of a complete plumbing system.

**BCT 219 Survey and Measurement****3 Credits**

Prerequisites: None. Presents fundamentals of surveying, including use of transit, reading angles, land description, restrictions and legal problems. Covers topographical maps and their use.

**BCT 220 Electrical Troubleshooting Techniques****3 Credits**

Prerequisites: TEC 113 – Basic Electricity and BCT 201 – Residential Wiring. Presents methods and techniques for troubleshooting appliances, motors, motor controls, relay wiring, residential wiring, commercial wiring and industrial wiring systems.

**BCT 221 Interior Trim****3 Credits**

Prerequisites: None. Develops basic knowledge, skills and awareness of interior trim. Provides training in installation of drywall, moldings, interior doors, kitchen cabinets and baseboard moldings.

**BCT 222 Estimating and Specifications****3 Credits**

Prerequisites: BCT 104 – Floor and Wall Layout and Construction and CON 106 – Construction Blueprint Reading I. Introduces wiring methods and material selection for commercial and industrial wiring systems. Studies mechanical installation of hardware as well as electrical design, layout and installation. Emphasizes tool use and material selection and installation.

**BCT 223 Plumbing Design and Installation****3 Credits**

Prerequisites: BCT 202 – Plumbing Fundamentals. Provides techniques for working with pipes and fittings. Studies residential and commercial electrical hot water heating systems, private well water systems and electrical components of plumbing systems.

**BCT 224 Energy Conservation Techniques****3 Credits**

Prerequisites: None. Offers an in-depth study of energy conservation techniques currently being applied and developed. Covers new materials, construction concepts and alternative approaches being developed to reduce energy consumption.

**BCT 225 Fabrication****3 Credits**

Prerequisites: None. Studies concepts and techniques of industrialized housing. Covers pre-fabrication, fabrication, jigs and rigging, including mobile homes, sectional homes and modular homes.

**BCT 226 Construction Supervisory Training****3 Credits**

Prerequisites: None. Examines the duties and responsibilities of the supervisor of a construction crew. Develops leadership abilities and techniques necessary to deal with special problems in daily construction work. Gives attention to adjusting to the role of supervisor and indicates what is expected from each member of the crew.

**BCT 227 AC/DC Circuits****3 Credits**

Prerequisites: None. Studies basic electrical principles for both DC and AC circuits. Includes electron theory, Ohm's Law, Watt's Law, Kirchoff's Laws, series circuits, parallel circuits, series-parallel circuits, electromagnetism and electromagnetic induction, inductance and inductive circuits, LR time constants, LR circuits, RC circuits, LRC circuits, impedance and phase angles for current voltage, resistance, reactance and power. Studies components including resistors, inductors, capacitors and transformers.

**BCT 231 Construction Supervision****3 Credits**

Prerequisites: None. Develops required skills in construction supervision.

**BDC 102 Mass Communications****3 Credits**

Prerequisites: None. Introduces mass media with emphasis on broadcast and cinema, from early development through the present. Examines the relationship between society and the media.

**BDC 106 Script Writing****3 Credits**

Prerequisites: ENG 025 - Introduction to College Writing II. Focuses on knowledge and skills needed to prepare objectives, audience analyses and overall planning for media productions. Examines visual flow and continuity, scripting formats and concept development.

**BDC 107 Field Production****3 Credits**

Prerequisites: None. Emphasizes skills development in the area of on-field recording of video and audio. Provides experience in lighting, on-location video recording and sound gathering.

**BDC 109 Post Production****3 Credits**

Prerequisites: VIS 115 - Computer Graphics or equivalent experience. Provides experience in digital video, editing, computer graphics and special effects in video and audio.

**BDC 201 Broadcast Studio Practices****3 Credits**

Prerequisites: VIS 105 - Video and Sound. Covers the theory of operation and technical skills related to set up, operation and routine maintenance of studio equipment.

**BDC 202 Broadcast Program Production****3 Credits**

Prerequisites: BDC 106 - Script Writing. Develops the skills needed to produce and direct broadcast programming and electronic field productions. Examines legal and business issues affecting the media producer.

**BDC 204 Special Projects I****3 Credits**

Prerequisites: Instructor approval. Accommodates student interest in specific areas. Students develop critical thinking and time management skills.

**BDC 205 Broadcast Operations****3 Credits**

Prerequisites: BDC 102 - Mass Communications. Examines daily operations of a broadcast facility, including promotion, management and sales.

**BDC 206 Independent Study I****3 Credits**

Prerequisites: Instructor approval. Provides the opportunity to develop skills in a specific area of study related to the program major. Project work must be of portfolio quality.

**BDC 280 Internship****3 Credits**

Prerequisites: Minimum of a 2.0 cumulative GPA at last grading period and permission of the program chairperson. Provides interested and qualified students with on-the-job training in entry-level skills required for employment in the broadcast field. Minimum of 140 laboratory hours.

**BKR 101 Yeast Breads I****3 Credits**

Prerequisites: HOS 105 - Introduction to Baking. Prepares students to produce a variety of yeast raised breads and rolls using both straight dough and sponge dough methods. Emphasizes proper mixing, fermentation, make-up proofing and baking.

**BKR 102 Yeast Breads II****3 Credits**

Prerequisites: HOS 105 - Introduction to Baking. Prepares students to produce a variety of pastries. Emphasizes proper proofing, baking and finishing. Focuses on sanitation, hygienic work habits and conformance with health regulations.

**BKR 103 Merchandising****3 Credits**

Prerequisites: BKR 102 - Yeast Breads II. Requires students to produce yeast raised and plasticized/sweet dough products for limited retail sale for a 12-week period. Studies merchandising and marketing, planning, production, controlling scrap, cash recaps and all pertinent phases of a retail bake shop operation.

**BKR 104 Baking Science****3 Credits**

Prerequisites: HOS 101 - Sanitation and First Aid, HOS 102 - Basic Foods Theory and Skills, HOS 105 - Introduction to Baking. Explores the science of baking and the different reactions that take place based on the ingredients, temperatures and equipment in relation to the final product.

**BKR 201 Cakes, Icings, and Fillings****3 Credits**

Prerequisites: HOS 105 - Introduction to Baking. Requires students to produce and finish a variety of cakes. Emphasizes application techniques, color coordination, and the flavor and texture of fillings. Practices the techniques of basic cake decorating. Emphasizes sanitation, hygienic work habits and conformance with health regulations.

**BKR 202 Advanced Decorating/Candies****3 Credits**

Prerequisites: BKR 201 - Cakes, Icings, and Fillings. Presents the six different classical styles of cake decorating, the production of gum paste objects which accompany the styles, the use of royal icings and investigates the similarities and differences between the six styles. Students will be required to produce examples of each style and technique, to include two practical examinations.

**BNK 215 Principles of Banking****3 Credits**

Prerequisites: None. Discussion ranges from fundamentals of negotiable instruments to contemporary issues and developments within the industry.

**BNK 216 Analyzing Financial Statements****3 Credits**

Prerequisites: None. Provides a practical introduction to financial analysis from the viewpoint of the commercial loan officer and develops skills needed to effectively assess a borrower's ability to repay loans.

**BNK 217 Law and Banking: Applications and Principles****3 Credits**

Prerequisites: None. Introduces laws pertaining to secured transactions, letters of credit, and the bank collection process. Provides a banker's guide to law and legal issues with special emphasis on the Uniform Commercial Code.

**BNK 218 Consumer Lending****3 Credits**

Prerequisites: None. Presents an insider's view of consumer lending, offering essential information about the maze of regulations that govern credit practices and reviews loan processing, cross-selling and collections.

**BNK 219 Bank Management****3 Credits**

Prerequisites: None. Provides a complete introduction to the handling of day-to-day bank activities and incorporates case studies to help acquire bank management skills.

**BNK 220 Trust Operations****3 Credits**

Prerequisites: None. Provides basic trust terminology and discusses the concepts and ideas that comprise the various trust functions. Translates them into workable procedures.

**BUS 101 Introduction to Business****3 Credits**

Prerequisites: None. Examines the U.S. business system in relation to the nation's economy. Studies business ownership, organization principles and problems, management, and administration and development practices of American business enterprises.

**BUS 102 Business Law****3 Credits**

Prerequisites: None. Describes the judicial system and the nature and sources of law affecting business. Studies contracts, sales and negotiable instruments with emphasis on Uniform Commercial Code applications. Includes appropriate remedies for breach of contract and tort liabilities. Examines business structures and agencies.

**BUS 103 Office Administration****3 Credits**

Prerequisites: None. Covers broad areas of administrative office services and management, including office organization, site location, layout and environment, records management, systems controls, and office communication services and devices.

**BUS 104 Investment****3 Credits**

Prerequisites: None. Presents the basis of investing, with attention to the various ways in which investment vehicles operate.

**BUS 105 Principles of Management****3 Credits**

Prerequisites: None. Describes the functions of managers, including the management of activities and personnel. Focuses on application of guidance principles in management.

**BUS 108 Personal Finance****3 Credits**

Prerequisites: None. Emphasizes management of individual financial resources for growth and maintenance of personal wealth. Covers home buying and mortgage financing, installment financing, life and health insurance, securities, commodities and other investment opportunities.

**BUS 110 Business Statistics****3 Credits**

Prerequisites: MAT 111 - Intermediate Algebra. Introduces students to the theory and applications of statistical inferential techniques as applied to business problems. The student is exposed to a software package to illustrate the extent that the computer has facilitated quantitative research.

**BUS 202 Human Resource Management****3 Credits**

Prerequisites: BUS 105 - Principles of Management. Focuses on the activities of human resource management, with emphasis on employer-employee relations, job analysis and evaluation, salary administration, work measurement and standards, performance appraisal and legal compliance.

**BUS 203 Business Development****3 Credits**

Prerequisites: 45 credit hours and/or departmental approval. Explores business operations for the self-employed or as a manager of a small business enterprise. Covers the role of entrepreneur and manager; selecting the appropriate business organization; developing plans and strategies for small, medium, and growing firms; securing financing for start-up and growing operations; exploring growth opportunities and successfully managing human and material resources.

**BUS 204 Case Problems in Business****3 Credits**

Prerequisites: 45 program credit hours to include ENG 111 - English Composition and MAT 111 - Intermediate Algebra or MAT 112 - Functional Mathematics and departmental approval. Applies business concepts and principles to specific case studies or problems.

**BUS 205 Risk Management****3 Credits**

Prerequisites: None. Examines risks faced by business firms and considers ways of handling them. Covers property, liability and personal losses, with attention to insurance contracts and their uses. Studies individual life, health and pension insurance, public policy, government regulations and social insurance programs.

**BUS 207 Introduction to International Business****3 Credits**

Prerequisites: BUS 101 - Introduction to Business and/or departmental approval. Provides an overview of the international environment within which business operates today. Demonstrates the global relationships between business activities and how events in one part of the world can influence business decisions and activities in other parts of the world.

**BUS 208 Organizational Behavior****3 Credits**

Prerequisites: BUS 105 - Principles of Management. Studies human behavior in organizations at the individual and group level, including the effect of organizational structure on behavior. Focuses on using organizational behavior concepts for developing and improving interpersonal skills.

**BUS 209 Introduction to eBusiness****3 Credits**

Prerequisites: None. Focuses on how eBusiness is being conducted and managed and its major opportunities, limitations, issues and risks. Applications to be discussed include those of business-to-consumers, business-to-business and intrabusiness. Because eBusiness is interdisciplinary, subject matter will be directed at managers, professionals and students who wish an overview of the eBusiness potential.

**BUS 210 Managerial Finance****3 Credits**

Prerequisites: MAT 112 - Functional Mathematics or MAT 111 - Intermediate Algebra, and ACC 101 - Principles of Accounting I. Improves decision-making skills related to the financial resources of a firm. Includes techniques of financial analysis, time value of money, capital budgeting, and risk.

**BUS 220 Conference Leadership Training****3 Credits**

Prerequisites: None. Stresses the importance of the conference in business and industry. Emphasizes the practical application of the various techniques of conference leadership and an understanding of group dynamics in the conference setting.

**BUS 221 Principles of Employment****3 Credits**

Corequisites: BUS 202 - Human Resource Management. Provides an in-depth look at the employment process. Emphasizes the role of recruiting, selecting and training of employees. Studies in detail techniques in job analysis, behavioral interviewing and on-the-job training.

**BUS 222 Benefits Administration****3 Credits**

Corequisites: BUS 202 - Human Resource Management. Provides an in-depth look at benefits administration. Topics include vacations, holiday pay, insurance, retirement programs and other employee inducements. Emphasizes cost of benefits in relationship to the overall compensation package. Looks at the relevance of reward, recognition and pay structures.

**BUS 223 Occupational Safety and Health****3 Credits**

Prerequisites: None. Emphasizes the importance of safety and health in the workplace. Examines the Occupational Safety and Health Act of 1970 in depth with relationship to businesses and their employees. Places emphasis on effective practices, costs, labor and management responsibilities, health hazards, alcohol and drug abuse, worker's compensation, physical conditions and training.

**BUS 280 Co-op/Internship****1-6 Credits**

Prerequisites: Departmental approval. Gives students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

**BUS 281-294 Special Topics in Business Administration****1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**CHD 113 Environments for Infants and Toddlers****3 Credits**

Prerequisites: None. Examines the physical, human and time environments required for high-quality care of infants and toddlers. The parent-teacher partnership along with adult-adult relationships within the environment are explored.

**CHD 120 Infant/Toddler Growth and Development****3 Credits**

Prerequisites: None. Studies the physical, social, emotional, cognitive and language development of infants and toddlers from conception. Examines the crucial role of brain development during the first three years.

**CHD 122 Child Growth and Development****3 Credits**

Prerequisites: None. Studies the physical, social, emotional, and cognitive development of children from conception to age 12, as well as quality care and education of young children.

**CHD 124 Developmentally Appropriate Guidance in a Cultural Context****3 Credits**

Prerequisites: None. Provides a basic understanding of the anti-bias/multi-cultural emphasis in the field of early childhood. Analyzes developmentally appropriate practices, theory, and implementation for various early childhood settings. Includes lectures, field trips, review of current literature and observations.

**CHD 142 Beginnings in Child Development****3 Credits**

Prerequisites: None. Examines basic principles of child development, developmentally appropriate practice (DAP), importance of family, licensing and elements of quality care of young children with an emphasis on health and safety and the learning environment. Entry-level course for early care and education teachers.

**CHD 143 Curriculum in the Early Childhood Classroom****3 Credits**

Prerequisites: None. Entry-level course for early care and education teachers. Examines developmentally appropriate environments and activities in various child care settings. Explores the varying developmental levels and cultural backgrounds of children.

**CHD 144 Reflections on Practice in Early Childhood****3 Credits**

Prerequisites: None. Examines child care practice, reflecting on the areas of relationship and communication within the program, curriculum development, program management, awareness, diversity and use of community resources. Offers resources to enhance professionalism.

**CHD 145 CDA Process****3 Credits**

Prerequisites: CHD 142 - Beginnings in Child Development, CHD 143 - Curriculum in the Early Childhood Classroom, CHD 144 - Reflections on Practice in Early Childhood or program chair approval. Prepares the student for the verification process for the Child Development Associate (CDA) credential. Provides opportunity for practical experience through supervised participation in early care and education settings.

**CHD 155 Generalist Practicum****3 Credits**

Prerequisites: CHD 144 - Reflections on Practice in Early Childhood, CHD 122 - Child Growth and Development. Corequisites: CHD 143 - Curriculum in the Early Childhood Classroom. Provides opportunity for practical experience through observation and supervised participation in child care settings. This practicum covers experiences with ages infant through school age.

**CHD 165 Infant Toddler Practicum****3 Credits**

Prerequisites: CHD 120 - Infant/Toddler Growth and Development. Corequisites: CHD 113 - Environments for Infants and Toddlers or CHD 213 - Infant/Toddler Care Programming. Provides opportunity for practical experiences through observation and supervised participation in an infant/toddler setting. Students develop and implement appropriate activities for this age of children.

**CHD 175 Preschool Practicum****3 Credits**

Prerequisites: CHD 142 - Beginnings in Child Development, CHD 144 - Reflections on Practice in Early Childhood. Corequisites: CHD 143 - Curriculum in the Early Childhood Classroom. Provides opportunity for practical experience through observation and supervised participation in early child care and education setting with children ages 3-5. Students will develop and implement developmentally appropriate environments and activities.

**CHD 185 School Age Practicum****3 Credits**

Prerequisites: CHD 122 - Child Growth and Development, CHD 142 - Beginnings in Child Development. Corequisites: CHD 211 - School Age Programming. Provides opportunities for practical experience through observation and supervised participation in a school-age setting. Students will develop and implement appropriate environments and activities.

**CHD 186 Grandparenting/Kinship Parenting****3 Credits**

Prerequisites: None. Provides an overview of the traditional grandparent role and the current role of grandparenting grandchildren. Includes a study of the goals, concerns and issues confronted by grandparents or other kin in the parenting role.

**CHD 202 Family/Teacher Partnership Skills****3 Credits**

Prerequisites: None. Examines the family/teacher partnership, recognizing the need to work successfully with the child's development. Promotes awareness of families as the child's first teacher and the child's basis for culture, language, attitudes and values. Provides the structure for creating practices that establish active family participation. Explores issues and resources for families.

**CHD 206 Early Childhood Administration****3 Credits**

Prerequisites: CHD 144 - Reflections on Practice in Early Childhood, CHD 122 - Child Growth and Development, CHD 142 Beginnings in Child Development or advisor approval. Introduces principles of managing an early care and education program. Emphasizes the role of the manager to include personnel and program administration and fiscal management. Explores client-community relations.

**3 Credits****CHD 209 Families in Transition**

Prerequisites: None. Examines the stages of the family life cycle and interpersonal relationships among family members. Explores systems dynamics within the family, the community and larger culture. Recognizes the impact of context and culture on the family's ability to function.

**3 Credits****CHD 211 School Age Programming**

Prerequisites: None. Examines environments, materials, methods and teaching styles for providing creative experiences for the school age child. Offers appropriate experiences in music, movement, art and drama as well as methods to assist students in identification and pursuit of specific personal interest areas in a school age child care setting. Reviews theories of adolescent growth and development, establishment of partnerships with families and positive guidance techniques for school age children.

**3 Credits****CHD 213 Infant/Toddler Care Programming**

Prerequisites: CHD 120 Infant/Toddler Growth and Development. Studies the program planning and operation for infant and toddler care and education. Examines the important role of the teacher in establishing positive and productive relationships with family and in managing an effective program.

**3 Credits****CHD 216 The Exceptional Child**

Prerequisites: None. Provides an introduction to caring for children with special needs. Includes theories and practices for producing optimal developmental growth while developing effective teaching techniques. Explores public policy, inclusion, early intervention and individual education programs (IEPs). Explores the many types of special needs and provides methods for helping with them.

**3 Credits****CHD 217 Skills for Parenting**

Prerequisites: None. Focuses on skill development in parents to increase their effectiveness in understanding young children, building the child's self-esteem, communicating with young children, setting appropriate boundaries and nurturing their emotional and social development. Examines models of parent education, parenting styles and the need for parent empowerment.

**3 Credits****CHD 218 Introduction to Care in the Home**

Prerequisites: None. Offers an overview of care of children in a homelike setting. Includes providing a safe, healthy learning environment in the home setting, family-provider relationships and recommendations for developing a professional support system.

**3 Credits****CHD 220 Leadership and Mentoring in Early Childhood Education**

Prerequisites: At least 20 hours of early childhood coursework. Introduces the concept of leadership. Includes theories of leadership and teamwork and provides an opportunity for students to shadow a leader in an early childhood setting.

**3 Credits****CHD 221 Emerging Literacy in Young Children**

Prerequisites: None. Emphasizes the development and acquisition of language in order to provide materials and activities for optimum growth. Students explore and evaluate literacy for young children and its role in the child's development. Students evaluate young children's literature for its appropriateness. Introduces audiovisual material, techniques and various types of equipment and materials used to promote literacy in young children.

**3 Credits****CHD 225 Cognitive Curriculum**

Prerequisites: None. Reviews cognitive theories to develop appropriate practices in activities as they relate to problem-solving skills, math, science and social studies in early childhood settings. Reviews multicultural education.

**3 Credits****CHD 242 Curriculum Planning for Early Childhood Administration**

Prerequisites: Program chair permission. Presents an overview of cognitive and creative curriculum from a developmentally appropriate perspective. Examines early childhood curriculum models with an emphasis on planning and evaluating curriculum to meet the comprehensive needs of the young child. Emphasizes staff and family involvement in curriculum planning, implementation and assessment.

**3 Credits****CHD 251 Early Childhood Professionalism**

Prerequisites: Completion of 48 program credits. Surveys and further examines early childhood philosophies, theories and theorists. Encourages students to form their own theories for learning, discipline, family involvement and self-concept development. Identifies preferred settings and environments for professional practice. Guides students in the development of a professional graduation portfolio.

**1-5 Credits****CHD 281-294 Special Topics in Early Childhood Education**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**CIS 100 Using Windows Environment****1 Credit**

Prerequisites: None. Introduces the basic concepts of Windows and Windows-based applications. The student will acquire the necessary concepts for accomplishing the most common tasks such as creating folders, copying, deleting and moving files from one folder to another or from a folder to an auxiliary storage medium. The student will also be introduced to such Windows applets as the NotePad and Accessories. Simple word processing, database, spreadsheet and communications programs will be introduced.

**CIS 101 Introduction to Microcomputers****3 Credits**

Prerequisites: ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competencies, or advisor approval. Coerequisites: Keyboarding at a rate of 25 GWAM with three-minute timing and no more than three errors, or advisor approval. Introduces the physical components and operations of microcomputers. Focuses on computer literacy and provides hands-on training in three areas of microcomputer application software: word processing, electronic spreadsheets and database management. Use of a professional business integrated applications package is emphasized.

**CIS 102 Information Systems Fundamentals****3 Credits**

Prerequisites: ENG 025 - Introduction to College Writing II, ENG 032 - Reading Strategies for College II, or demonstrated competencies or advisor approval. Introduces information processing and programming with emphasis on hands-on computer experience. Examines the role of information processing in an organization, including information processing applications, computer hardware and software, internal data representation, stored program concepts, systems and programming design, flowcharting and data communications. Reviews the history of computers, related computer careers, the social impact of computers and computer security.

**CIS 104 Introduction to COBOL Programming****3 Credits**

Corequisites: CIS 113 - Logic, Design, and Programming. Provides an introduction to COBOL (Common Business Oriented Language) with major emphasis on developing structured programming skills. Develops proficiency in applying the programming development cycle to elementary business problems.

**CIS 105 Operating Systems****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Studies computer operating systems, purposes, structure, and various functions. Provides general understanding of how comprehensive sets of language translators and service programs, operating under supervisory coordination of an integrated control program, form the total operating systems of a computer.

**CIS 106 Microcomputer Operating System****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or CIS 102 - Information Systems Fundamentals. Introduces the organization, structure and functions of an operating system for a microcomputer. Presents the student with operating system concepts such as commands, error messages, interrupts, function calls, device drivers, structure, files and organization. Incorporates concepts into practical applications.

**CIS 107 Microcomputer Programming****3 Credits**

Prerequisites: CIS 102 - Information Systems Fundamentals and CIS 113 - Logic, Design, and Programming. Introduces a structured microcomputer language. Concepts in input/output commands, arithmetic expressions, conditional control, iteration techniques and subroutines will be stressed. Concepts will be incorporated into the application of solving business problems.

**CIS 108 Practical Computer Operations****3 Credits**

Prerequisites: None. Demonstrates workstation and minicomputer operations including peripheral devices. Provides information on data processing area including job responsibilities, standards and run manuals, message control functions, documentation and back-up procedures.

**CIS 109 UNIX Operating Systems****3 Credits**

Prerequisites: CIS 101 - Introduction of Microcomputers or CIS 106 - Microcomputer Operating Systems or advisor approval. Studies the UNIX V operating system and its use as a time-sharing operating system. Includes basic UNIX commands, use of the visual editor, the UNIX directory structure and file management with SHELL commands. Offers opportunities to apply skills and knowledge in a laboratory environment.

**CIS 110 Basic Programming Language****3 Credits**

Corequisites: CIS 113 - Logic, Design and Programming. Introduces concepts of program design and programming using the BASIC programming language, the primary language for use with microcomputers. Includes overview of basic arithmetic operations, accumulating and printing totals, comparing, array processing, and interactive programming. Offers students an opportunity to apply skills in a laboratory environment.

**CIS 113 Logic, Design and Programming****3 Credits**

Corequisites: ENG 025 - Introduction to College Writing II, ENG 032 - Reading Strategies for College II or demonstrated competencies, CIS 101 - Introduction to Microcomputers or CIS 102 - Information Systems Fundamentals or advisor approval. Introduces the structured techniques necessary for efficient solution of business-related computer programming logic problems and coding solutions into a high-level language. Includes program

lowcharting, pseudocoding, and hierarchy charts as a means of solving these problems. Covers creating file layouts, print charts, program narratives, user documentation and system flowcharts for business problems. Reviews algorithm development, flowcharting, input/output techniques, looping, modules, selection structures, file handling and control breaks. Offers students an opportunity to apply skills in a laboratory environment.

### **CIS 114 Principles of Management Information Systems**

**3 Credits**

Prerequisites: CIS 102 - Information Systems Fundamentals. Corequisites: BUS 101 - Introduction to Business. Examines the functions and operations required to manage information for business decisions. Focuses on the use of various information technologies and tools that support transaction processing, decision-making, and strategic planning. The diverse information needs of different organizations within a business will be used as examples of practical application of MIS technology.

### **CIS 116 Introduction to Java Programming**

**3 Credits**

Prerequisites: None, but prefer CIS 113 - Logic, Design, and Programming, a Windows-based class and Internet experience. This course provides a basic understanding of the fundamental concepts involved when using a member of a Java programming development language. The emphasis is on logical program design using a modular approach involving task oriented program functions. Java allows the design of an Internet user interface. The application is built by selecting forms and controls, assigning properties, and writing code.

### **CIS 120 Programming I**

**3 Credits**

Corequisites: CIS 113 - Logic, Design, and Programming or advisor approval. Provides an introduction to business programming with the major emphasis on developing structured programming skills. Students will develop proficiency in applying the programming development cycle to elementary business problems.

### **CIS 201 Database Design and Management**

**3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or CIS 102 - Information Systems Fundamentals. Introduces program applications in a database environment and includes discussion of data structures; indexed and direct file organizations; data models including hierarchical, network and relational; storage devices, data administration and analysis; design and implementation. Allows students to use database software in creating, modifying, retrieving and reporting from databases. Develops business application using a database language.

### **CIS 202 Data Communications**

**3 Credits**

Prerequisites: CIS 102 - Information Systems Fundamentals. Introduces concepts of data communications for computer programming students to build a foundation of knowledge upon which to add new technologies.

### **CIS 203 Systems Analysis and Design**

**3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers plus a minimum of 12 CIS credits successfully completed. Provides instruction for creating or modifying a system by gathering details, analyzing data, designing systems to provide solutions, and implementing and maintaining the systems.

### **CIS 204 Advanced COBOL Programming**

**3 Credits**

Prerequisites: CIS 104 - Introduction to COBOL Programming. Continues topics introduced in CIS 104 - Introduction to COBOL Programming with more logically complex business problems. Develops a higher level of COBOL proficiency as well as greater familiarity with debugging techniques. Uses the structured approach through class instruction and laboratory experience.

### **CIS 206 Project Development with High-Level Tools**

**3 Credits**

Corequisites: CIS 201 - Database Design and Management or CIS 203 - Systems Analysis and Design. Analyzes established and evolving methodologies for the development of business-oriented computer information systems. Develops competencies in techniques that apply modern software tools to generate applications directly, without requiring detailed and highly technical program writing efforts.

### **CIS 207 Microcomputer Database Management Systems**

**3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Presents an overview of relational, hierarchical and network database models with emphasis on microcomputer relational database management systems (DBMS). Provides practical experience in using database software to create, modify, retrieve and report. Develops business applications using the database language.

### **CIS 209 Computer Business Applications**

**3 Credits**

Prerequisites: CIS 201 - Database Design and Management, COM 101 - Fundamentals of Public Speaking or COM 102 - Introduction to Interpersonal Communication. Corequisites: CIS 203 - Systems Analysis and Design. Requires students to apply business, microcomputer, and communication skills within business applications. Emphasizes application of several forms of computerized information processing including data processing, word processing, spreadsheets, graphics, and communications. Analyzes the effects of automation on the office worker, management, and the work environment and requires written and oral presentations.

**CIS 210 COBOL III****3 Credits**

Prerequisites: CIS 204 - Advanced COBOL Programming. Emphasizes file handling techniques on tape and direct access devices and the use of libraries via the COBOL, CALL and COPY verbs. Introduces variant forms of the structured approach and unstructured concepts such as the GO TO verb. Helps students develop good programming practices and an entry-level COBOL competency.

**CIS 211 RPG Programming Fundamentals****3 Credits**

Prerequisites: CIS 102 - Information Processing Fundamentals and CIS 113 - Logic, Design, and Programming. Provides a general introduction to the RPG programming language with emphasis on hands-on programming experience. Presents the most important features of the RPG language from input/output processing to applications requiring handling. Introduces language concepts in class lecture. Includes programming lab assignments.

**CIS 212 "C"/"C++" Programming****3 Credits**

Prerequisites: CIS 113 - Logic, Design, and Programming or advisor approval. Provides a basic understanding of the fundamental concepts involved when using a low development language. Emphasizes one logical program design using a modular approach involving task-oriented program functions. Discusses the role of data types, storage classes, and addressable memory locations.

**CIS 213 Assembler Language Program****3 Credits**

Prerequisites: CIS 102 - Information Processing Fundamentals and CIS 113 - Logic, Design, and Programming. Gives students a basic understanding of the assembler process using IBM mainframe computers. Stresses the importance of byte-wise manipulation of data fields when using low-level languages. Emphasizes the actual workings of a computer during the execution of a computer program. Discusses the role of data types, EBCDIC format of data storage, and addressable memory locations.

**CIS 214 Pascal Programming****3 Credits**

Prerequisites: None. Provides a basic understanding of the structured programming process necessary for successful Pascal programming. Emphasizes top-down program design and modularity, using Pascal procedures, functions, and independent subprograms. Discusses simple and advanced data types and program control aids, algorithm development, and program debugging. Provides students with a fundamental understanding of good programming technique and a basic knowledge of Pascal syntax and structure.

**CIS 215 Field Study****4 Credits**

Prerequisites: Completion of a minimum of 30 program credits with 15 in CIS courses. Provides opportunity for a field project or research case study within the computer technology field. Includes collection and analysis of data and/or actual work experience in business or industry.

**CIS 216 Advanced RPG Programming****3 Credits**

Prerequisites: CIS 211 - RPG Programming Fundamentals. Offers advanced study in the use of the RPG compiler language in solving business problems. Focuses on file processing methods and a working knowledge of advanced features and techniques through laboratory experience.

**CIS 217 Programming II****3 Credits**

Corequisites: CIS 113 - Logic, Design, and Programming or advisor approval. Provides a basic understanding of the fundamental concepts involved when using a development language. The emphasis is on program design using a modular approach involving task-oriented program functions. The role of data types, storage classes, and addressable memory locations is thoroughly discussed.

**CIS 220 Shell Command Language****3 Credits**

Prerequisites: None. Teaches students how to write, test and debug shell procedures on a computer utilizing a UNIX operating system. Presents the shell and how it works, shell processes, variables, keyword and positional parameters, control constructs, special substitutions, pipelines, debugging aids, error/interrupt processing and shell command line. Offers students the opportunity to apply skills in a laboratory environment.

**CIS 221 Advanced "C"/"C++" Programming****3 Credits**

Prerequisites: CIS 212 - "C"/"C++" Programming. Continues those topics introduced in "C" Language Programming with emphasis on array processing, file processing and advanced debugging techniques. Provides the opportunity to apply skills in a laboratory environment. This class will also introduce the concept of object oriented programming using the C++ computer language. Differences between C++ and classical C programming will be addressed.

**CIS 223 Integrated Business Software****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or program advisor approval. Presents knowledge of integrated microcomputer software concepts. Students design a complete business system utilizing all parts of an integrated microcomputer software package which can share the same data and manipulate it. Includes use of word processing, electronic spreadsheets, graphics, databases and command languages.

**CIS 224 Hardware and Software Troubleshooting****3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating Systems. Presents an in-depth analysis of the components of a computer system and their relationship to each other. Includes concepts of parallel and serial connectivity, installation and maintenance of software, peripheral devices, interface cards and device drivers. Analyzes realistic hardware/software problems encountered in the workplace and techniques and procedures used to implement solutions.

**CIS 225 Advanced Database Management Systems****3 Credits**

Prerequisites: CIS 201 - Database Design and Management or CIS 207 - Microcomputer Database Management Systems. Continues CIS 207 Microcomputer Database Management Systems. Emphasizes the development of advanced applications in database management.

**CIS 227 Topics in Information Management****3 Credits**

Prerequisites: CIS 102 - Information Systems Fundamentals. Discusses topics of current interest in information management. Includes examples from production, operations, accounting, finance, marketing, sales and human resources. Focuses on special interest projects. Utilizes field trips, guest speakers, audio-visual activities and seminars.

**CIS 228 Cooperative Education****1-9 Credits**

Prerequisites: Have completed 50% of required major course credits, with at least a 2.5 average in the occupational field of study, as well as a 2.5 overall scholastic average. Provides students with the opportunity to apply concepts learned in the classroom to actual work situations. Requires program Advisor approval.

**CIS 229 Seminar I****1 Credit**

Prerequisites: Program advisor approval. Discusses topics of current interest in computerized information management with an emphasis on the application of information management skills during lab time. Various seminar topics may be identified and offered each term under this course number.

**CIS 230 Seminar II****2 Credits**

Prerequisites: Program advisor approval. Discusses topics of current interest in computerized information management with emphasis on application of information management skills during lab time. Identifies and offers various seminar topics each term under this course number.

**CIS 231 Structured Query Language****3 Credits**

Prerequisites: CIS 201 - Database Design and Management. SQL is now a dominant language used in mainframe, mini, and microcomputer databases (Access, dBASE, paradox, DB2, FoxPro, Oracle, SQL Server, and Btrieve) by diverse groups such as home computer owners, small businesses, large organizations and programmers. It acts as a bridge between the user, the database management system, the data tables and transactions involving all three.

**CIS 232 Visual Basic Programming****3 Credits**

Prerequisites: CIS 113 - Logic, Design, and Programming and previous experience with Windows-based software. Provides a basic understanding of fundamental concepts involved when using a member of a Windows programming development language. Emphasizes logical program design using a modular approach involving task-oriented program functions. Allows the design of a Windows user interface.

**CIS 233 Graphic User Interfaces: Windows****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Provides a foundation of fundamental concepts in the use of Windows-type software. Explores the Windows operating system, accessories and various applications. Develops a proficiency with Windows operations including customizing the environment, integrating applications and managing files.

**CIS 235 Network Fundamentals****3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating System and Windows-based training is recommended. Corequisites: CIS 202 - Data Communications. Studies local area networks, their topologies and functions. Provides a general understanding of the basic LAN protocols. Covers utilization of application software using a local area network to share resources among network members, transferring files between users, set-up and administration of a network, identification of hardware and software needs and LAN-to-mainframe connectivity.

**CIS 240 A+ Certification I****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or CIS 102 - Information Systems Fundamentals or program chair approval. Consists of the first of two courses required to train for the A+ certification program. Presents microcomputer knowledge and skills in detail. Presents an in-depth study of the components of a computer system and their relationships to each other. Includes all the concepts required to prepare for the A+ certification tests. Students analyze realistic hardware/software problems and perform several lab processes to assist in learning techniques and procedures to implement solutions.

**CIS 241 A+ Certification II****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or CIS 102 - Information Systems Fundamentals or program chair approval. Consists of the second of two courses required to train for the A+ Certification program. Presents microcomputer knowledge and skills in detail. Presents an in-depth study of the components of a computer system and their relationships to each other. Includes all the concepts required to prepare for the A+ certification tests. Students analyze realistic software/hardware problems and perform several lab processes to assist in learning techniques and procedures to implement solutions.

**CIS 243 Novell Network Administration I****3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating Systems. Corequisites: CIS 202 - Data Communications or CIS 235 - Network Fundamentals. Introduces the organization, structure, functions, and administration of a network operating system. Trains the student in administration of a local area network. Presents network operating system concepts such as file and shared printing, data protection, application installation and electronic messaging. Concepts will be incorporated into practical applications.

**CIS 244 Novell Network Administration II****3 Credits**

Prerequisites: CIS 243 - Novell Network Administration I. Introduces file server management, maintenance, installation and configuration concepts and techniques. Trains the student in the tasks required for management and administration of a local area network file server. Presents information on various installation techniques. Concepts will be incorporated into practical applications.

**CIS 245 Networking Technologies Concepts****3 Credits**

Prerequisites: CIS 243 - Novell Network Administration I. Introduces the basic concepts of computer networking. Describes the services provided by a network and explains the different media used to access network services. The OSI model of computer networks is introduced and a description of each of its layers is provided. The OSI model is compared to several different network systems to demonstrate how the network services fit into the model.

**CIS 246 Novell Network Hardware Service and Support****3 Credits**

Corequisites: CIS 244 - Novell Network Administration II. Provides hands-on experience in troubleshooting various components of a computer system including memory, hard disk sub-systems, network interface cards and network cabling. Focuses on the prevention, diagnosis and resolution of hardware-related networking problems. Several hands-on labs are used to allow the student to develop a diagnostic ability.

**CIS 247 Novell Network Administration III****3 Credits**

Corequisites: CIS 246 - Novell Network Hardware Service and Support. Introduces the student to a mixed operating systems network. Introduces network directory services. Teaches the student how to inter-network two different network operating systems. Directory services troubleshooting and network performances issues are covered. Also covers advanced printing techniques and print server configuration.

**CIS 251 Advanced Operating Systems****3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating System. Studies advanced topics in operating systems as they apply to Networking application.

**CIS 252 Web Site Development****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or CIS 102 - Information Systems Fundamentals or program advisor approval. Creates a business or personal World Wide Web presence and uses Web technology. Creates a professional and successful World Wide Web site.

**CIS 253 Graphic Image Lab****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or program advisor approval. Introduces students to computer graphic design. The beginning focus of the course is on basic computer terminology and use, mastering fundamental skills, and developing efficient working styles. These skills are then developed by creating animation, graphics presentations, and graphics manipulations.

**CIS 254 GUI and WWW****3 Credits**

Prerequisites: Previous knowledge of Windows 3.X - Office software; CIS 233 - Graphic User Interfaces: Windows and CIS 232 Visual Basic Programming helpful. Provides a foundation of fundamental concepts in the use of GUI software. Employs a document-centric approach using all the main applications of Windows-Based Operating Systems and Windows-Based Applications, but integrates the use of the World Wide Web to increase the quality of the output.

**CIS 255 Network Operating Systems****3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating Systems or program advisor approval. Provides access to many client computers through the hardware and software on each computer. Delivers a view of four primary Network Operating Systems used in the workplace today. It also provides a detailed study with hands-on laboratory exercises that promote an understanding and installation of Network Operating Systems. A special emphasis on Novell (v3.12), (v4.01), Microsoft NT (v.3.51 and 4.0) and Unix (Linux) are provided. Students learn how to plan and install the operating system and client workstations.

**CIS 256 LAN/Data Communications****3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating Systems or program advisor approval, Windows-based training is recommended. Draws on practical examples to explain technical concepts of data communications. Provides a practical understanding of relevant terminology, concepts, hardware, software, protocols, architectures and other information needed to assist the student in grasping the ever-changing world of data communications. In addition, it provides a look at networks (LAN) and wide area networks (WAN) and explores planning and analyzing communications systems.

**CIS 258 Network Communication and Connectivity****3 Credits**

Prerequisites: CIS 202 - Data Communications or CIS 235 - Network Fundamentals and program advisor approval. Although networking hardware and software are constantly changing, this course presents a detailed view and analysis of the mechanics and protocols used in computer networks. TCP/IP protocols have taken over where OSI protocols have left off. This course attempts to analyze the TCP/IP model and its close association with the Internet and ATM networks.

**CIS 263 Windows NT Network Administration I****3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating Systems. Corequisites: CIS 202 - Data Communications or CIS 235 - Network Fundamentals. Introduces the organization, structure, functions, and administration of a network operating system. Trains the student in administration of a local area network. Presents network operating system concepts such as file and shared printing, data protection, application installation and electronic messaging. Concepts will be incorporated into practical application.

**CIS 264 Windows NT Network Administration II****3 Credits**

Prerequisites: CIS 263 - Windows NT Network Administration I. Introduces file server management, maintenance, installation and configuration concepts and techniques. Trains the student in the task required for management and administration of a local area network file server. Presents information on various installation techniques. Concepts will be incorporated into practical applications.

**CIS 266 Windows NT Network Hardware Service and Support****3 Credits**

Prerequisites: CIS 264 - Windows NT Network Administration II. Provides hands-on experience in troubleshooting various components of a computer system including memory, hard disk subsystems, network interface cards and network cabling. Focuses on the prevention, diagnosis and resolution of hardware-related networking problems. Several hands-on labs are used to allow the students to develop a diagnostic ability.

**CIS 273 Network Administration****3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating Systems. Corequisites: CIS 202 - Data Communications or CIS 235 - Network Fundamentals. Introduces the organization, structure, functions and administration of a network operating system. Trains the student in administration of local area networks. Presents network operating system concepts such as file and shared printing, data protection, application installation and electronic messaging. Concepts will be incorporated into practical applications.

**CIS 280 Co-op/Internship****1-6 Credits**

Prerequisites: None. Provides students with the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

**CIS 281-294 Special Topics in Computer Information Systems****1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**CRJ 101 Introduction to Criminal Justice Systems****3 Credits**

Prerequisites: None. Covers the purposes, functions and history of law enforcement, courts and correctional systems. Explores the interrelationships and responsibilities of the criminal justice system.

**CRJ 103 Cultural Awareness****3 Credits**

Prerequisites: None. Studies American criminal justice problems and systems in historical and cultural perspectives. Discusses social and public policy factors affecting crime. Emphasizes multidisciplinary and multicultural perspectives.

**CRJ 105 Introduction to Criminology****3 Credits**

Prerequisites: None. Reviews crime and delinquency, types of offenses and offenders and the basic units of the criminal justice system, and introduces the role of law enforcement in prevention and control of deviant behavior.

**CRJ 111 Introduction to Traffic Control****3 Credits**

Prerequisites: None. Examines the role of law enforcement in traffic safety, traffic administration, traffic laws, accident investigation, police safety and patrol practices.

**CRJ 113 Criminal Investigations****3 Credits**

Prerequisites: None. Studies the organization and functions of investigative agencies, basic considerations in criminal investigations, collection and preservation of physical evidence and elements of legal proof in the submission of evidence. Introduces investigation of specific types of offenses.

**CRJ 115 Criminalistics****3 Credits**

Prerequisites: CRJ 113 - Criminal Investigations. Introduces crime scene procedure, theory and practice in evidence collections, transportation, identification, processing and the chain of custody.

**CRJ 118 Introduction to Law Enforcement****3 Credits**

Prerequisites: None. Introduces fundamental law enforcement operations and organization. Includes the evolution of law enforcement at federal, state and local levels.

**CRJ 121 Juvenile Law and Procedures****3 Credits**

Prerequisites: None. Includes an overview of the juvenile justice system, treatment and prevention programs and special areas and laws unique to juveniles.

**CRJ 123 Juvenile Justice Systems****3 Credits**

Prerequisites: None. Introduces the nature, etiology and extent of juvenile crime, functions and jurisdictions of juvenile agencies, and juvenile processing, detention and case disposition.

**CRJ 131 Community Based Corrections****3 Credits**

Prerequisites: None. Reviews programs for convicted offenders that are alternatives to incarceration, including diversion, house arrest, restitution, community service and other topics. Reviews post-incarceration situations, probation and parole.

**CRJ 133 Legal Issues in Corrections****3 Credits**

Prerequisites: None. Explores sentencing and incarceration, legal issues applicable to probation and parole, objectives of correctional processes and influences in correctional decision making.

**CRJ 202 Adjudication****3 Credits**

Prerequisites: None. Includes topics related to the adjudication process in criminal cases including arraignments and preliminary hearings, suppression hearings, trials, sentencing, juvenile court and probation and parole. Reviews the role of criminal justice personnel in court processes.

**CRJ 203 Police and Community Relations****3 Credits**

Prerequisites: None. Introduces police-community relations and examines trends, practices and social and individual effects of police work. Emphasizes problem solving, conflict management and police-community interaction.

**CRJ 205 Procedural Criminal Law****3 Credits**

Prerequisites: LEG 211 - Criminal Law. Covers theory and practice of procedural criminal law. Introduces law of arrest, search and seizure, confessions, suspect identification and surveillance. Emphasizes Indiana criminal law.

**CRJ 222 Special Issues in Youth Services****3 Credits**

Prerequisites: CHD 209 - Families in Transition, HMS 215 - Juvenile Delinquency. Examines issues commonly encountered in the youth care field.

**CRJ 223 Special Issues in Corrections****3 Credits**

Prerequisites: HMS 105 - Introduction to Correctional Rehabilitation Services, HMS 204 - Human Services Internship Seminar 2, CRJ 131 - Community-Based Corrections. Investigates topics of special interest related to corrections with an emphasis on the classification and treatment of inmates. Topics may vary to reflect contemporary corrections issues.

**CRJ 280 Internship****4 Credits**

Prerequisites: CRJ 101 - Introduction to Criminal Justice Systems, CRJ 103 - Cultural Awareness, LEG 211 - Criminal Law. Provides fieldwork experience in an approved social, educational, law enforcement, corrections or other criminal justice organization.

**CON 101 Introduction to Construction Technology****3 Credits**

Prerequisites: None. Presents history of building construction to present-day applications emphasizing future trends and construction as a career. Provides practice in the operation, maintenance, and safety of various tools including the builder's level and transit.

**CON 106 Construction Blueprint Reading I****3 Credits**

Prerequisites: None. Provides instruction and practice in the use of working drawings and applications from the print to the work. Includes relationship of views and details, interpretation of dimension, transposing scale, tolerance, electrical symbols, sections, materials list, architectural plans, room schedules, and plot plans.

**CON 204 Estimating and Specifications****3 Credits**

Prerequisites: CON 106 - Construction Blueprint Reading I. Presents the student with the estimating process for residential construction. Emphasizes reading blueprints and specifications, estimating labor, materials take-off, and pricing.

**CON 280 Co-op/Internship****1-6 Credits**

Prerequisites: Students must have completed a minimum of 30 credits toward their degrees with a cumulative grade point average of at least 3.0. Gives students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

**CON 281-294 Special Topics in Construction Technology****1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**CUL 110 Meat Cutting****2 Credits**

Prerequisites: None. Introduces meat cutting. The student will gain knowledge in the breakdown of beef, pork, poultry, lamb, and veal.

**CUL 202 Specialized Cuisine****3 Credits**

Prerequisites: 4th semester class. Introduces students to foods from various cultures. Provides a background in the history of foods from various countries and develops food preparation skills. Covers table service and tableside food preparation.

**CUL 207 Classical Cuisine****3 Credits**

Prerequisites: None. Presents advanced and sophisticated classical culinary methods following the principles and techniques of Escoffier. Studies cooking techniques, timing, presentation, history and terms pertaining to classical foods and menus with emphasis on French cuisines. Provides practical experience in table service operation, kitchen coordination and timing.

**CUL 212 Fish and Seafood****2 Credits**

Prerequisites: HOS 109 - Hospitality Purchasing. Discusses the importance of fish and seafood in today's market. Includes types and categories of American and imported fish and shellfish and proper buying, storage, preparation and merchandising of fish and seafood. Provides experience in boning, cutting and cooking methods appropriate for seafood.

**DCT 101 Basic Drafting****3 Credits**

Prerequisites: None. Introduces basic mechanical drafting techniques.

**DCT 104 Mechanical Drafting****3 Credits**

Prerequisites: TEC 102 - Technical Graphics, DSN 103 - CAD Fundamentals or advisor approval. Introduces the set concept of working drawings both in detailing and assembly. Presents fastening devices, thread symbols and nomenclature, surface texture symbols, classes of fits and the use of parts lists, titles and revision blocks. Introduces the basics of product design and the design process.

**DCT 105 Facilities Design and Layout****3 Credits**

Prerequisites: TEC 102 - Technical Graphics. Focuses on the architectural drawings of commercial or industrial buildings. Covers problems of space planning, design, materials, HVAC systems and construction methods. Develops working drawings and presentation drawings. Requires oral presentations and discussions. Requires students to complete research on a limited number of construction materials and methods.

**DCT 107 Advanced CAD****3 Credits**

Prerequisites: DSN 103 - CAD Fundamentals. Instructs students in fundamentals of 3-D modeling for design. Includes overview of modeling, types, graphic manipulation, part structuring, coordinate systems, and developing strategy of model geometry.

**DCT 108 Residential Drafting****3 Credits**

Prerequisites: Advisor approval. Covers residential planning and drafting. Includes interior planning, structural design, and development of working drawings. Provides opportunity for students to design a residence using accepted building standards from information given in class.

**DCT 109 Construction Materials and Specifications****3 Credits**

Prerequisites: None. Introduces various construction materials, composition and application. Studies specifications of materials, construction contracts and applications required in the building industry.

**DCT 110 Architectural Rendering****3 Credits**

Prerequisites: TEC 102 - Technical Graphics. Presents a survey and history of pictorial drawings. Studies light and color, rendering media, and application of different techniques and media through a series of exercises.

**DCT 112 CAD Applications****3 Credits**

Prerequisites: DSN 103 - CAD Fundamentals. Includes advanced dimensioning techniques using the dimension variables for GDT and ordinate dimensioning, grips, xrefs, aligning auxiliary views, paragraph text importing and editing and the use of system and AutoCAD variables.

**DCT 113 Intermediate CAD****3 Credits**

Prerequisites: DSN 103 - CAD Fundamentals, TEC 104 - Computer Fundamentals for Technology. Continues study of CAD fundamentals. Focuses on advanced CAD features and various methods of customizing CAD systems.

**DCT 201 Schematic Drafting****3 Credits**

Prerequisites: TEC 102 - Technical Graphics, DSN 103 - CAD Fundamentals. Corequisites: DCT 206 - Mechanical and Electrical Equipment. Presents the systematic layout of various types of schematic drawing done by a draftsperson. Requires students to prepare finished drawings for manufacture or installation of plumbing, heating, electrical, electronic and fluid-power type drawing.

**DCT 202 CAD Programming Language****3 Credits**

Prerequisites: DSN 103 - CAD Fundamentals. Covers use of computer language to program commands for CAD.

**DCT 204 Architectural CAD****3 Credits**

Prerequisites: DSN 103 - CAD Fundamentals. Presents advanced computer-aided design topics including architectural design. Includes all necessary drawings needed for the construction process.

**DCT 205 Introduction to Plastics****3 Credits**

Prerequisites: TEC 102 - Technical Graphics. Introduces students to the major plastic processing industries, techniques, and most widely used plastic polymers, their applications and properties.

**DCT 206 Mechanical and Electrical Equipment****3 Credits**

Prerequisites: MAT 111 - Intermediate Algebra or MAT 131 - Algebra/Trigonometry I. Focuses on mechanical and electrical requirements for a structure. Studies electrical load calculations, wire sizing and circuits. Calculates plumbing requirements, fixture units and pipe sizing. Includes heating systems, duct layout and sizing.

**DCT 207 Die Design Drafting****3 Credits**

Prerequisites: DCT 104 - Product Drafting, TEC 101 - Manufacturing Processes. Studies the drafting, detailing and design of blanking, piercing and forming dies. Covers material reaction to shear, cutting clearances and nest gauging.

**DCT 208 Structural Detailing****3 Credits**

Prerequisites: TEC 102 - Technical Graphics, DSN 103 - CAD Fundamentals, DCT 109 - Construction Materials and Specifications and Advisor approval. Focuses on detailing commercial structural members, their connections, materials and methods of construction. Concentrates on traditional materials, such as reinforced concrete, masonry, steel and timber.

**DCT 209 Estimating/CAD****3 Credits**

Prerequisites: DCT 204 - Architectural CAD, DCT 108 - Residential Drafting. Introduces estimating procedures used in the building industry. Studies material takeoffs, estimating overhead expenses, contingencies, labor and equipment. Involves the use of computers to generate takeoffs and to set pricing.

**DCT 210 Surveying I****3 Credits**

Prerequisites: MAT 121 - Geometry/Trigonometry or MAT 131 - Algebra/Trigonometry I. Introduces surveying equipment, procedures for performing measurements, turning angles, determining grades and other field applications. Covers surveying techniques and computations using the level, chain and transit in calculating areas, lines and grades.

**DCT 211 Commercial Structures I****3 Credits**

Prerequisites: DCT 204 - Architectural CAD, DCT 108 - Residential Drafting. Focuses on planning and drawing commercial structures. Uses a presentation drawing and working drawing for concrete structures and steel structures.

**DCT 212 Commercial Structures II****3 Credits**

Prerequisites: DCT 211 - Commercial Structures I. Focuses on planning and drawing commercial structures. Uses working drawings for pre-engineered and concrete/steel structures.

**DCT 213 CAD Mapping****3 Credits**

Prerequisites: DSN 103 - CAD Fundamentals, DCT 210 - Surveying I. Covers the concepts of map making with computer-aided drafting and typical drafting media found in the industry. Studies civil engineering applications of mapping procedures including profiles, topography and site plans.

**DCT 214 Machine Design****3 Credits**

Prerequisites: DCT 104 - Product Drafting, MAT 111 - Intermediate Algebra or MAT 131 - Algebra/Trigonometry I. Presents practical solutions to mechanical design problems. Studies the design of machine elements including shafts, bearings, keys, pins and springs. Includes the geometry and drafting of cams and gears and the study of linkages.

**DCT 215 Electronic Drafting/CAD****3 Credits**

Prerequisites: TEC 102 - Technical Graphics and DSN 103 - CAD Fundamentals. Introduces students to electronic schematics, drill indexing, and printed circuit board design. Emphasizes the creation and manipulation of basic symbols, connection diagrams, block and logic diagrams, including the use of figure parts and data extract.

**DCT 216 Jig and Fixture Design****3 Credits**

Prerequisites: DCT 104 - Product Drafting and TEC 101 - Manufacturing Processes. Introduces the processes of drafting and design as applied to tooling. Emphasizes tooling, locators, supports, holding devices, clearances and design as it pertains to jig and fixtures.

**DCT 217 Product Design****3 Credits**

Prerequisites: DCT 104 - Product Drafting and DSN 222 - Strength of Materials. Provides the student an opportunity to apply all previously acquired knowledge in product drafting to the design of a new or existing consumer product. Considers the function, aesthetics, cost economics and marketability of the product. Requires a research paper and product illustration.

**DCT 218 CAD/CAM Design****3 Credits**

Prerequisites: DSN 220 - Advanced CAD. Covers the development of various machine routines. Studies the control of the CNC mill and lathe. Includes material handling and robotics.

**DCT 227 Geometric Dimensioning and Tolerancing****3 Credits**

Prerequisites: TEC 102 - Technical Graphics. Introduces the fundamental principles of geometric dimensioning and tolerancing according to the latest ANSI standards. Applies geometric dimensioning and tolerancing symbols along with tolerances of form, profile, orientation, run-out, and location.

**DCT 228 Civil I****3 Credits**

Prerequisites: TEC 102 - Technical Graphics and DSN 103 - CAD Fundamentals. Explores the engineering field. Presents an overview of infrastructure design including the study of roadways and drainage systems. Emphasizes site development and highway planning.

**DCT 229 Civil II****3 Credits**

Prerequisites: DCT 228 - Civil I. Presents construction management techniques, including scheduling and contracts. Studies soil properties and paving methods. Examines practical construction considerations.

**DCT 230 Computer Rendering and Animation****3 Credits**

Prerequisites: DSN 220 - Advanced CAD. Instructs students in fundamentals of computer generalized renderings and animations using 3-D Studio software and its components.

**DEN 102 Dental Materials and Laboratory I****3 Credits**

Prerequisites: Admission to Dental Assistant Program. Reviews properties of dental materials, proper modes of manipulation, necessary armamentarium used and technical duties which dental assistants perform. Stresses clinical behavior of materials and biological factors of importance to dental assistants.

**DEN 115 Preclinical Practice I****4 Credits**

Prerequisites: Admission to the Dental Assistant Program. Introduces qualifications and legal-ethical requirements of the dental assistant. History and professional organizations are surveyed. Emphasizes clinical environment and responsibilities, chair-side assisting, equipment and instrument identification, tray setups, sterilization, characteristics of microorganisms and disease control.

**DEN 116 Dental Emergencies/Pharmacology****2 Credits**

Prerequisites: None. Surveys the most commonly utilized and required first aid measures for emergencies. Examines proper techniques and procedures as well as equipment, medications and position care of the patient. Reviews anatomy/physiology and cardiopulmonary rescue as provided by the American Heart Association.

**DEN 117 Dental Office Management****2 Credits**

Prerequisites: Admission to the Dental Assistant Program. Explores principles of administrative planning, bookkeeping, filing, recall programs, banking, tax records, computer software, insurance, office practice and management as related to the dental office. Attention is given to techniques of appointment control, record keeping, and credit and payment plans.

**DEN 118 Dental Radiography****4 Credits**

Prerequisites: DEN 123 – Dental Anatomy and DEN 115 – Preclinical Practice I. Concentrates on principles, benefits, effects and control of X-ray production. Covers history, radiation sources, modern dental radiographic equipment and techniques, anatomical landmarks, dental films and processing. Emphasizes avoidance of errors while exposing and processing dental radiographs.

**DEN 122 Clinical Practicum I****1 Credit**

Prerequisites: DEN 102 - Dental Materials and Laboratory I, DEN 115 - Preclinical Practice I, DEN 116 - Dental Emergencies/Pharmacology, and DEN 123 - Dental Anatomy. Chairside skills are applied in a clinical office situation on live patients.

**DEN 123 Dental Anatomy****2 Credits**

Prerequisites: None. Focuses on oral, head and neck anatomy, basic embryology, histology, tooth morphology, and charting dental surfaces related to the dental field. Includes dental anomalies, pathological conditions, and terminology relevant to effective communication.

**DEN 124 Preventive Dentistry/Diet and Nutrition****2 Credits**

Prerequisites: DEN 115 - Preclinical Practice I, DEN 123 Dental Anatomy. Emphasizes the importance of preventive dentistry and effects of diet and nutrition on dental health. Presents techniques of assisting patients in the maintenance of good oral hygiene.

**DEN 125 Preclinical Practice II****3 Credits**

Prerequisites: None. Continues Preclinical Practice I. Anesthesia is presented. The following dental specialties are presented: Oral and Maxillofacial Surgery, Periodontics, Endodontics, Pediatric Dentistry, Orthodontics, Prosthodontics and Dental Public Health.

**DEN 129 Dental Materials and Laboratory II****3 Credits**

Prerequisites: DEN 102 – Dental Materials and Laboratory I. Continues Dental Materials and Laboratory I.

**DEN 130 Clinical Practicum II****5 Credits**

Prerequisites: All required courses of DA program prior to summer session. A clinical learning experience that provides increased practical chairside dental assisting experience to be gained from private dental practices in general and specialty areas of dentistry. Opportunity for increased skill development in clinical support and business office procedures also provided. Weekly seminars are included as an integral part of the learning experience. Simulated exams are administered to review for the national certification examination.

**DEN 131 Basic Integrated Science****2 Credits**

Prerequisites: None. Examines the human body as an integrated unit. Includes anatomy, physiology and medical terminology.

**DSN 103 CAD Fundamentals****3 Credits**

Prerequisites: None. Corequisites: TEC 102 - Technical Graphics or advisor approval. Introduces fundamentals of CAD (Computer-Aided Design/Drafting). Includes overview of CAD and systems, use of software and plotter applications. Each student will complete an individual project by the end of the semester.

**DSN 106 Descriptive Geometry****3 Credits**

Prerequisites: TEC 102 - Technical Graphics. Introduces fundamental principles in developing graphical solutions to engineering problems. Covers true length, piercing points on a plane, line intersections, true shapes, revolutions and developments using successive auxiliary views.

**DSN 220 Advanced CAD****3 Credits**

Prerequisites: TEC 102 - Technical Graphics and DSN 103 - CAD Fundamentals. Focuses on advanced CAD features including fundamentals of three-dimensional modeling for design. Includes overview of modeling, graphic manipulation, part structuring, coordinate system and developing strategy of model geometry.

**DSN 221 Statics****3 Credits**

Prerequisites: MAT 121 - Geometry/Trigonometry or MAT 131 - Algebra/Trigonometry I. Corequisites: PHY 101 - Physics I. Studies applied mechanics dealing with bodies at rest. Covers units, vectors, forces, equilibrium, moments and couples, planar force systems, distributed forces, analysis of structures (trusses and frames) and friction.

**DSN 222 Strength of Materials****3 Credits**

Prerequisites: DSN 221 - Statics. Studies internal stresses and physical deformations caused by externally applied loads to structural members. Covers stress and strain, shear stress, properties of areas, shearing force and bending moment, deformation of beams, columns and combined stresses. Teaches various materials' physical and mechanical properties.

**DSN 225 Portfolio Preparation****3 Credits**

Prerequisites: 45 credit hours in the program or advisor approval. Focuses on the student's final portfolio and preparation for the job interview. Finalizes design/project work demonstrating acquired knowledge and job skills along with résumé and cover letter preparation for presentation to prospective employers. Every student must submit a copy of final portfolio for departmental archives.

**DSN 280 Co-op/Internship****3 Credits**

Prerequisites: Students must have completed a minimum of 30 credits toward their degree with at least a 3.0 cumulative grade point average. Requires students to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

**DSN 281-294 Special Topics in Design Technology****1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**ELT 120 Introduction to Electronics****3 Credits**

Prerequisites: MAT 050 - Basic Algebra. Provides the student with limited preparatory study and entry into program level content. Topics include laboratory skills, basic manipulative skills, interpretation of diagrams and hand soldering techniques. Emphasis is placed upon the use of Electronic Work Bench software to model and analyze electronic components and circuits.

**ELT 121 Circuits I****3 Credits**

Corequisites: MAT 131 - Algebra/Trigonometry or MAT 134 - Trigonometry and ELT 120 - Introduction to Electronics. Introduces the basics of electricity and electronics. Covers DC circuits. Uses lab work to stress the use of test equipment. Discusses resistance, magnetism, series circuits, parallel circuits, Ohm's Law, Kirchhoff's Laws and circuit analysis (superposition, Thevenin, etc.).

**ELT 122 Circuits II****3 Credits**

Prerequisites: ELT 121 - Circuits I, MAT 131 - Algebra/Trigonometry I. Studies electrical principles and laws pertaining to alternating current and voltage. Covers AC network theorems, operator, phasors, reactances, impedances, phase relationships, power, resonance, transformers, polyphase and filter circuits.

**ELT 124 Digital I****3 Credits**

Corequisites: ELT 120 - Introduction to Electronics, MAT 111 - Intermediate Algebra or equivalent score on the ASSET intermediate algebra test. Introduces digital electronics including logic gates and combinational logic circuits. Studies binary arithmetic, Boolean algebra, mapping techniques, digital encoders and decoders, multiplexers and demultiplexers and arithmetic circuits. Uses SSI and MSI digital integrated circuits.

**ELT 125 Digital II****3 Credits**

Prerequisites: ELT 124 - Digital I. Offers advanced study of digital systems including memory and D/A conversion. Covers construction of specified timing circuits, design driver/display systems, selected register design, counters and arithmetic circuits and validation of operation. Studies hardware and general microprocessor system organization.

**ELT 126 Solid State I****3 Credits**

Prerequisites: MAT 131 - Algebra/Trigonometry I, or MAT 134 - Trigonometry, ELT 122 - Circuits II (may be corequisite). Studies characteristics and applications of semiconductor devices and circuits. Covers signal and rectifying diodes, bipolar transistors, rectification, single and multistage amplifiers, AC/DC load lines, biasing techniques, equivalent circuits and power amplifiers.

**ELT 127 Industrial Electronics****3 Credits**

Prerequisites: ELT 126 - Solid State 1. Presents overview of electronics in the industrial setting. Instructs students in how electronics is applied to industrial systems. Introduces power machines, polyphase systems, solid state controls, transducers and industrial computer systems.

**ELT 128 Introduction to Lasers****3 Credits**

Prerequisites: MAT 131 - Algebra/Trigonometry I. Introduces laser action, laser beam characteristics, types of lasers, safety considerations, general laser applications, laser and optical equipment. Teaches basics of laser, laser systems and prepares beginning laser students for future courses.

**ELT 130 Fiber Optics****3 Credits**

Corequisites: ELT 122 - Circuits II. Presents overview of fiber optics. Studies uses for fiber optics, advantages, cable details, connectors, splices, sources, detectors and fiber optic systems.

**ELT 203 Introduction to Industrial Controls****3 Credits**

Prerequisites: ELT 221 - Solid State II, ELT 223 - Electrical Machines. Studies basics of controls related to industrial electronics. Includes basic and pilot control devices such as circuit layouts, industrial schematics, reduced voltage starters and multi-speed controllers. Covers transformer hook-ups and circuit protection.

**ELT 206 Analog Troubleshooting Techniques****3 Credits**

Prerequisites: ELT 228 - Communications Electronics. Studies techniques for logical troubleshooting of electronic circuits and simple systems with emphasis on systematic diagnostic methods, signal tracing and signal injection methods. Provides experience in use of test equipment and electronic communication skills.

**ELT 207 Digital Troubleshooting Techniques****3 Credits**

Prerequisites: ELT 222 - Microprocessors. Studies techniques for logical troubleshooting of microcomputers. Includes modal testers, microcomputer controlled testers, static stimulus testers, signature analysis and logic analyzers. Emphasizes system oriented troubleshooting procedures.

**ELT 212 Networking****3 Credits**

Prerequisites: ELT 222 - Microprocessors. Studies types of protocol used in data communication systems. Includes an overview of networking, networking control and interfacing. Emphasizes protocols, packet switching systems and local area networks.

**ELT 214 Industrial Instrumentation****3 Credits**

Prerequisites: ELT 126 - Solid State 1. Emphasizes precision measurement via pressure, strain, force, flow and level gauges. Covers the related probes, sensors, transducers, computer interfaces, computer hardware and peripherals and computer software necessary for the acquisition, summarization, analysis and presentation of data.

**ELT 215 Laser Systems and Applications****3 Credits**

Prerequisites: ELT 122 - Circuits II, ELT 128 - Introduction to Lasers, ELT 240 - Optics. Provides an in-depth coverage of laser types and applications. Focuses on ion, molecular, liquid, solid state and semi-conductor lasers with specific attention given to Nd:YAG, Ruby, CO<sub>2</sub> and gallium arsenide. Discusses flash lamps, power supplies (CW and pulsed) and energy transfer mechanisms for each laser type. Examines other parts of laser systems including electro-optic and acousto-optic modulators, Q-switching, mode locking and mechanical and bleachable dye methods. Includes a description of lasers in medicine, surgery, dentistry, communications, range finding, alignment tracking, welding, cutting, drilling, data recording and display. Stresses hands-on operation and troubleshooting of each laser type and small-scale examples of applications.

**ELT 216 Laser and Optical Measurements****3 Credits**

Prerequisites: None. Examines the instruments and methods available for evaluating laser light and supporting optical equipment (lenses, mirrors, etc.). Includes an introduction to radiometry/photometry and typical energy/power detectors. Photographic recording mediums and important optical measuring instruments (spectrometers, spectrophotometers, monochromators and interferometers) and methods (interference and non-interference testing) are also discussed. Laboratory experiments stress hands-on experience with current optical measuring equipment and methods.

**ELT 219 Biomedical Electronics I****3 Credits**

Prerequisites: ELT 125 - Digital II. Offers further study of medical electronics equipment including ECG, EEG, defibrillators, heart monitors and other monitoring and respiratory equipment.

**ELT 220 Biomedical Electronics II****3 Credits**

Prerequisites: ELT 219 - Biomedical Electronics I. Studies medical support systems including x-ray equipment, respirators and analyzers, and their maintenance. Studies medical ultra-sound, electrosurgery units and mechanical recorders. Prepares students for licensing and certification.

**ELT 221 Solid State II****3 Credits**

Prerequisites: ELT 126 - Solid State I. Studies applications of special-purpose diodes, thyristors and unipolar transistors. Discusses frequency effects and responses of amplifiers. Includes discrete SCRs, UJTs, FETs, oscillators, linear regulated power supplies, switching regulators and power amplifiers. Introduces op-amps.

**ELT 222 Microprocessors****3 Credits**

Prerequisites: TEC 104 - Computer Fundamentals for Technology, ELT 125 - Digital II. Introduces microprocessor system organization, operation, design, troubleshooting and programming. Investigates and analyzes a microprocessor instruction set for its operation. Includes programming and interfacing a microprocessor.

**ELT 223 Electrical Machines****3 Credits**

Prerequisites: ELT 122 - Circuits II, MAT 131 - Algebra/Trigonometry I. Provides an overview of electrical machines and how they relate to industrial electronics. Gives industrial electronics technicians insight into electrical power generation, polyphase system, transformers, all types of electrical motors, power factor and power factor correction, back-up power and electrical power monitoring.

**ELT 224 Linear Integrated Circuit Application****3 Credits**

Prerequisites: ELT 221 - Solid State II. Introduces operational amplifiers (op-amps), characteristics and operations. Includes op-amp active filters, amplifiers, regulators, comparators, timers, oscillators and phase-locked loops.

**ELT 225 Introduction to National Electrical Code****3 Credits**

Prerequisites: None. Introduces the role and use of the National Electrical Code Book. Provides an overview of interpretation, calculations, and revisions of the code book.

**ELT 226 Computer Troubleshooting****3 Credits**

Prerequisites: ELT 222 - Microprocessors. Studies techniques for logical troubleshooting of microcomputers. Emphasizes system-oriented troubleshooting procedures.

**ELT 227 Peripherals****3 Credits**

Prerequisites: ELT 226 - Computer Troubleshooting. Studies peripherals commonly used with computers and microcomputers interfacing with these peripherals. Includes a study of data communications hardware and techniques. Studies the design of circuits to interface microprocessors with industrial equipment. Includes microcomputer systems interfacing with input and output transducers for control systems. Studies techniques for logical troubleshooting of microcomputer systems.

**ELT 228 Communications Electronics****3 Credits**

Corequisites: ELT 221 - Solid State II. Analyzes communication circuits with emphasis on AM, FM, SSB, and stereo transmitter and receiver systems. Includes noise modulation and demodulation principles, phase-locked loop, RF amplifiers, automatic gain control, detectors, limiters and discriminators. Offers hands-on lab exposure to analog circuits utilizing analysis and troubleshooting techniques.

**ELT 229 Telecommunications****3 Credits**

Prerequisites: ELT 125 - Digital II, ELT 126 - Solid State I. Examines various methods in transmitting digital data from one location to another. Covers time and frequency division multiplexing. Includes pulse-code and delta modulation, telemetry, error detection and correction and simple networks. Covers techniques for logical troubleshooting of telephonic systems.

**ELT 230 Advanced Communications Electronics****3 Credits**

Prerequisites: ELT 228 - Communications Electronics. Introduces antenna principles and wave propagation and an in-depth study of matching techniques for transmission lines. Includes the Smith Chart and a thorough study of television operation. Measures radiation patterns with different antenna arrays. Practices digital and analog troubleshooting techniques.

**ELT 231 Microwave Communications****3 Credits**

Prerequisites: ELT 230 - Advanced Communications Electronics. Studies microwave transmission lines, waveguides, waveguide components including hybrid couplers, attenuators, microwave filters, phase shifters, T-junctions, irises and microwave tubes.

**ELT 233 Industrial Motors and Controls****3 Credits**

Prerequisites: ELT 122 - Circuits II, AMT 201 - Manufacturing Systems Control (PLCs). Provides a complete understanding of basic ladder and wiring diagrams used in the control of electric motors. Includes the various electrical components and their functions as applied to motor controls. Topics include the various types of motors used in applying electro-mechanical power, ranging from small AC shaded-pole fan motors through larger three-phase motors. Motor starting components, protective devices, heat dissipation, motor slippage and frequency and multi-speed motors are discussed. Lab assignments allow the student a hands-on approach to wiring various control components in the operation of three-phase motors.

**ELT 234 Advanced Problem Solving****3 Credits**

Prerequisites: ELT 125 - Digital II. Corequisites: ELT 221 - Solid State II, ELT 224 - Linear Integrated Circuit Applications. Introduces logical troubleshooting of electronic circuits and systems with emphasis on systematic diagnostic methods and technical reference research. Provides further experience in the use of test equipment and proper repair techniques. Includes job preparedness skills and preparation for appropriate certification testing.

**ELT 235 Process Control****3 Credits**

Prerequisites: ELT 224 - Linear Integrated Circuit Applications. Covers theory and applications of process control including the principles of PID feedback, open loop and closed loop systems and typical process control applications.

**ELT 237 Calibrations****3 Credits**

Corequisites or Prerequisites: ELT 122 - Circuits II. Provides training in dismantling and calibration of instruments (electronic and pneumatic) found in industry, including DP cells, pH and oxygen analyzers, valve positioners, thermocouple circuits and controllers and control valves.

**ELT 238 Process Instrumentation****3 Credits**

Prerequisites: ELT 125 - Digital II, ELT 221 - Solid State II. Presents the concepts and fundamentals of measurement instrumentation and its application to industrial process control.

**ELT 239 Troubleshooting Techniques****3 Credits**

Prerequisites: ELT 125 - Digital II, ELT 221 - Solid State II, ELT 233 - Industrial Motors and Controls, and approval of program chair. Introduces techniques of logical troubleshooting of electronic circuits and systems with emphasis on systematic diagnostic methods, signal tracing and signal injection methods. Provides further experience in the use of test equipment and proper repair techniques. Class sessions will consist of lecture discussion and problem recitation. Problem-solving and laboratory assignments will reinforce concepts in the reading and lecture experience.

**ELT 280 Co-op/Internship****1-6 Credits**

Prerequisites: None. Provides students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

**ELT 281-294 Special Topics in Electronics Technology****1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**ENV 101 Introduction to Environmental Technology****3 Credits**

Prerequisites: None. Provides students with an overview of pollution problems involving water, air, solid waste, radiation population, and noise. Discusses current national and international problems and concerns.

**ENV 102 Environmental Management****3 Credits**

Prerequisites: None. Introduces the political process of environmental law.

**ENV 103 Environmental Chemistry****3 Credits**

Prerequisites: MAT 111 - Intermediate Algebra. Provides hands-on laboratory training in the application of EPA and state-required permit parameters to determine facility compliance. Reviews sampling techniques and preservation methods and basic statistical quality control analysis.

**ENV 104 Plant Operations—Sanitary****3 Credits**

Prerequisites: Advisor approval. Provides the basic principles of aerobic and anaerobic biological treatment processes including activated sludge, trickling filters, lagoons, sludge handling and disinfection. Reviews state and federal regulations related to wastewater plants.

**ENV 105 Air Management****3 Credits**

Prerequisites: None. Focuses on understanding air pollution sources, effects and treatment technologies.

**ENV 106 Water****3 Credits**

Prerequisites: ENV 103 - Environmental Chemistry. Introduces the basic treatment processes of water supplies including coagulation, sedimentation, filtration, chemical dosage, taste and odor control.

**ENV 107 Applied Research I****3 Credits**

Prerequisites: Advisor approval. Requires completion of a special project or case study specifically related to the occupational area. Serves as a field project within the framework of actual working experience in business or industry or a research case study including data collection and data analysis.

**ENV 204 Basic Fluid Mechanics****3 Credits**

Prerequisites: None. Introduces the principles of flow measurement, metering in closed conduits, open channels, streams, storm run-off, pump characteristics and air flow.

**ENV 208 Plant Operations—Industrial****3 Credits**

Prerequisites: Advisor approval. Covers wastewater treatment processes including coagulation, sedimentation, activated sludge, neutralization, equalization and cyanide and chromate removal. Presents instrumentation, maintenance and troubleshooting. Includes operations, laboratory testing and associated mathematics.

**ENV 214 Environmental Regulations****3 Credits**

Prerequisites: None. Surveys the major current environmental regulations.

**ENV 215 Waste Disposal****3 Credits**

Prerequisites: ENV 212 - Solids Handling and Disposal. Provides students with a basic understanding of solid and hazardous waste disposal problems.

**ENV 280 Co-op/Internship****1-6 Credits**

Prerequisites: Departmental approval. Provides students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

**FST 102 Food Service Equipment Operations****3 Credits**

Prerequisites: None. An in-depth study of food service equipment including cleaning, preventive maintenance, specifications and legal requirements with an emphasis on usage.

**FST 104 Food Production, Methods, and Procedures****3 Credits**

Prerequisites: FST 102 - Food Service Equipment and Operations. Provides study of and application of food production methods and procedures with an emphasis on soups, sauces and gravies.

**FST 105 Quality Service Standards****3 Credits**

Prerequisites: HOS 101 - Sanitation and First Aid. Provides students with techniques of serving, bussing and cashiering in dining operations.

**FST 106 - Application of Food Service Production I****3 Credits**

Prerequisites: HOS 101 - Sanitation and First Aid, FST 102 - Food Service Equipment Operations, and FST 104 - Food Production, Methods, and Procedures. Provides the knowledge and applications of the principles of pantry production, baking, vegetable and fruit preparation, pastries and breakfast cookery.

**FST 108 Application of Food Service Production II****3 Credits**

Prerequisites: HOS 101 - Sanitation and First Aid, FST 102 - Food Service Equipment Operations, and FST 106 - Application of Food Service Production I. Provides knowledge and application of production methods and procedures for meat, seafood, poultry, dairy products and hot hors d'oeuvres.

**GRA 102 Introduction to Machine Printing****3 Credits**

Prerequisites: None. Provides a history and overview of the interrelationships of processes, materials and techniques utilizing equipment and tools necessary in platemaking, bindery/finishing and offset press. Allows students to take assigned projects from design to bindery.

**GRA 104 Art and Copy Preparation****3 Credits**

Prerequisites: None. Provides a foundation in design, typographic and communication concepts. Presents traditional techniques as well as computer-aided technologies in the consideration of color, format and use of visuals in illustration. Emphasizes problem solving with assignments executed through strip-up of the negative into a flat and proofing.

**GRA 106 Introduction to Color Printing****3 Credits**

Prerequisites: None. Studies basic color theory, materials and methods used in reproduction processes. Covers techniques and materials with assignments utilizing different processes including 4-color from pre-separated negatives, register and run. Includes inks and systems.

**GRA 107 Composition Systems I****3 Credits**

Prerequisites: None. Covers use, operation and application of machine principles and mechanisms related to typesetting, laboratory projects in setting composition photographically and utilization and examination of various input systems.

**GRA 201 Photomechanical Reproduction****3 Credits**

Prerequisites: None. Introduces image conversion in black and white and color theory. Examines photo chemistry, halftones, darkroom techniques and diffusion transfer.

**GRA 202 Science of Color****3 Credits**

Prerequisites: None. Presents physical properties of light and color and psychological aspects of color perception and relationships through creative exercises. Examines color theories of Itten, Munsell, Goethe, Chevreul and Albers.

**GRA 204 Designing with Type****3 Credits**

Prerequisites: None. Introduces typography, type classification, identification and selection. Includes copy fitting, mark-up systems, proofreading, and fundamentals of layout and design for print media.

**GRA 205 Survey of Printing Processes****3 Credits**

Prerequisites: None. Presents topics not normally covered in other courses. Examines those types of printing businesses in local area utilizing guest lecturers from these businesses. Local market is surveyed and students are responsible for a research project concerning a local business with presentation of oral or written report.

**GRA 207 Audiovisual Presentation****3 Credits**

Prerequisites: None. Teaches the use of design principles in 35mm color transparencies and fundamentals of studio production and editing. Requires each student to present a slide/tape production that conveys a concept through the effective combination of images, music and/or narration.

**GRA 213 Desktop Publishing****3 Credits**

Prerequisites: None. Covers computer techniques in pre-preparatory and preparatory composing procedures including typesetting and typographic concepts. Emphasizes computer skills and output.

**GRA 214 Screen Printing****3 Credits**

Prerequisites: None. Explores screen construction and process reproduction methods. Includes paper, tusche, knife-cut and photographic stencils and printing media surfaces applications.

**GRA 215 Computer Graphics II****3 Credits**

Prerequisites: None. Provides an overview of computers and their creative potential in graphic design focusing on videotext graphics. Allows students to create and manipulate images using a keyboard and a graphics tablet.

**HEA 101 Heating Fundamentals****3 Credits**

Prerequisites: None. Introduces fundamentals applicable to the heating phase of air conditioning. Includes types of units, parts, basic controls, functions and applications. Emphasizes practices, tools and meter uses, temperature measurement, heat flow and tubing installation and connecting practices.

**HEA 103 Refrigeration I****3 Credits**

Prerequisites: None. Introduces compression systems used in mechanical refrigeration, including the refrigeration cycle. Introduces safety procedures and proper uses of tools used to install and service refrigeration equipment.

**HEA 104 Heating Service****3 Credits**

Prerequisites: HEA 101 - Heating Fundamentals and TEC 113 - Basic Electricity. Covers procedures used to analyze mechanical and electrical problems encountered when servicing heating systems including gas, oil, electric and hydronic heating equipment. Considers electrical schematic and diagrams, combustion testing, venting and combustion air requirements, installation and service procedures.

**HEA 106 Refrigeration II****3 Credits**

Prerequisites: HEA 103 - Refrigeration I and TEC 113 - Basic Electricity. Continues Refrigeration I with further study of compressors, metering devices and an introduction to troubleshooting procedures. Includes clean-up procedures following compressor burn-out and analysis of how a single problem affects the rest of the system.

**HEA 107 Duct Fabrication and Installation****3 Credits**

Prerequisites: Advisor approval. Emphasizes reading blueprints common to the sheet metal trade, floor plans, elevations, section, detail and mechanical plans. Requires students to develop a layout of an air conditioning system, layout of duct work and fittings and fabrication of these parts, including proper use of hand-tools, and shop equipment used to fabricate duct work and fittings.

**HEA 201 Cooling Service****3 Credits**

Prerequisites: TEC 113 - Basic Electricity and HEA 103 - Refrigeration I. Covers procedures used to diagnose electrical control problems found in residential air conditioning and refrigeration systems including 24-volt and line voltage controls such as defrost timers, defrost heaters, relays and cold controls with emphasis on schematic and pictorial diagrams.

**HEA 202 Electrical Circuits and Controls****3 Credits**

Prerequisites: HEA 101 - Heating Fundamentals, HEA 103 - Refrigeration I, and TEC 113 - Basic Electricity. Studies various kinds of heating, air conditioning and refrigeration controls. Includes gas, oil, cooling and electric heat controls, thermostats and other kinds of variable controls such as humidistats, aquastats and electronic thermostats and temperature controls. Covers operation of controls and how they are integrated into complex systems by using schematic and pictorial diagrams. Presents component troubleshooting and testing.

**HEA 203 Heat Loss and Gain Calculation****3 Credits**

Prerequisites: Advisor approval. Covers methods used in calculating building envelope heat loss and heat gain in sizing units for residential and light commercial applications. Discusses building construction techniques and energy consumption reduction methods.

**HEA 204 Commercial Refrigeration****3 Credits**

Prerequisites: HEA 106 - Refrigeration II. Examines air conditioning and refrigeration systems for commercial use, including medium- and low-temperature applications. Includes refrigeration accessories, metering devices and advance control arrangements.

**HEA 205 Heat Pump Systems****3 Credits**

Prerequisites: Advisor approval. Provides an understanding of the different types of heat pumps available for use today. Familiarizes students with the refrigeration cycle as it applies to the heat pump systems. Provides students with the opportunity to draw, trace and follow an electrical schematic of a heat pump with refrigerant. Includes selecting the proper heat pump, recording heat loss and gain calculations for the space available. Provides instruction in mechanical components and in troubleshooting a non-functioning heat pump.

**HEA 206 Advanced Cooling Service****3 Credits**

Prerequisites: HEA 201 - Cooling Service. Considers methods of troubleshooting electrical and mechanical components of air conditioning and refrigeration systems.

**HEA 207 HVAC Codes****3 Credits**

Prerequisites: None. Study of state and local codes covering installation, repair, alteration, relocation, replacement and erection of heating, ventilation, cooling and refrigeration systems. Includes job-related costs of material and equipment, labor, warranty, taxes, permits and sub-contracts. Students will estimate service and maintenance contracts.

**HEA 208 Energy Management and Balancing****3 Credits**

Prerequisites: Advisor approval. Deals with reduction in energy usage in a facility, operational and maintenance improvements, new building design standards, shut-down and consolidation, alternate energy resources, retrofitting existing buildings and energy awareness. Includes practice in adjusting and setting fan speeds, dampers and other air regulating devices.

**HEA 209 Psychrometrics/Air Distribution****3 Credits**

Prerequisites: Advisor approval. Studies the properties of air during the operational variations of temperature and humidity. Discusses the atmospheric conditions and the impact of those conditions on the heating-cooling processes and the design of systems for residential and commercial structures. Includes the sizing and configurations of air delivery duct systems and system design methods.

**HEA 210 Alternative Energy Systems****3 Credits**

Prerequisites: Advisor approval. Studies the magnitude of the energy available, the various methods used in collecting this energy, how to use it and how to store it for heating and cooling work. Selects components of the systems, including collector cells sizing, pump sizing, pipe, and duct sizing and designing distribution systems. Reviews controls for systems. Studies operating costs and savings.

**HEA 211 Absorption Systems****3 Credits**

Prerequisites: HEA 206 - Advanced Cooling Service or equivalent in mechanical training and HEA 212 - Advanced HVAC Controls or equivalent in electrical training. Surveys special cooling systems with emphasis on the absorption cycle. Includes ammonia-water and lithium-bromide cycles, types of units, arrangements, parts, function of various parts and applications of units into air conditioning systems in addition to diagnosis of service problems.

**HEA 212 Advanced HVAC Controls****3 Credits**

Prerequisites: HEA 202 - Electrical Circuits and Controls. Covers control systems beyond ordinary residential and single zone commercial applications. Includes solid state controls, zoning controls, modulating controls, low ambient controls, heat recovery and energy management controls, economizer controls and pneumatic controls.

**HEA 213 Sales and Service Management****3 Credits**

Prerequisites: Advisor approval. Encompasses the use of blueprints, specifications, AIA documents, application data sheets, bid forms and contracts in estimating materials and labor in the HVAC business. Includes advertising, direct labor, indirect labor, overhead, warranty overages, taxes, permits, subcontracts, margins, mark-ups and profit. Provides students with the opportunity to estimate service contracts and study service organization, service procedures, record keeping, parts inventory control and insurance liability.

**HEA 214 Applied Design****3 Credits**

Prerequisites: Advisor approval. Provides students with the opportunity to design and lay out a complete HVAC system.

**HEA 220 Distribution Systems****3 Credits**

Prerequisites: Advisor approval. Covers methods used in calculating building envelope heat loss and gain in sizing units for residential and light commercial applications. Studies the relationship of air properties to temperature and the design of systems for residential and light commercial structures. Includes the sizing and configurations of air delivery duct systems.

**HEA 221 Heat Pumps and Cooling Service****3 Credits**

Prerequisites: HEA 106 - Refrigeration II. Covers procedures used to diagnose electrical control problems found in residential air-to-air, geothermal heat pump and cooling systems including 24-volt and line voltage controls. Familiarizes students with the refrigeration cycle as it applies to the heat pump. Covers correct charging procedures and sizing of heat pumps. Includes trouble shooting of heat pumps and cooling systems such as defrost timers, defrost heaters, relays and cold controls with emphasis on schematic and pictorial diagrams.

**HHS 101 Medical Terminology****3 Credits**

Prerequisites: None. Addresses basic terminology required of the allied health professional. Presents Greek and Latin prefixes, as well as suffixes, word roots and combining forms. Emphasizes forming a solid foundation for a medical vocabulary including meaning, spelling, and pronunciation. Includes medical abbreviations, signs and symbols.

**HHS 102 Medical Law and Ethics****2 Credits**

Prerequisites: Demonstrated competency in reading through appropriate assessment or successful completion of BSA reading coursework. Presents ethics of medicine and medical practice as well as legal requirements and implications for allied health professions.

**HHS 103 Dosage Calculation****1 Credit**

Prerequisites: Demonstrated competencies in mathematics and reading or ENG 031 - Reading Strategies for College I and MAT 044 - Mathematics. Introduces the mathematical concepts required of the allied health professional to accurately administer medications.

**HHS 104 CPR and Basic Health Awareness****1 Credit**

Prerequisites: None. Provides students with information necessary to recognize the need for one- and two-person cardiopulmonary resuscitation (CPR) as it relates to adults, children and infants. Requires students to safely perform CPR.

**HHS 106 Holistic Concepts and Skills****3 Credits**

Prerequisites: Demonstrated competency in ENG 024 - Introduction to College Writing I, and ENG 031 - Reading Strategies for College I or through appropriate assessment. Introduces the student to the holistic approach in the art and science of healthful living. The course content emphasizes the interrelatedness of the total person—body, mind and spirit—in achieving the goals of therapeutic, rehabilitative and maintenance roles. The student will identify and model methods of personal holistic wellness in society.

**HHS 281-294 Special Topics in Health and Human Services****1-5 Credits**

Prerequisites: Advisor approval. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program areas. Contact chief academic officer for more information.

**HLT 125 Health Care Systems and Trends****3 Credits**

Prerequisites: None. Studies the health care industry emphasizing the systems approach to health care and the current trends facing the industry. Gives special attention to managed care organizations.

**HLT 225 Finance and Budgeting for Health Care****3 Credits**

Prerequisites: ACC 101 - Principles of Accounting I. Importance is placed on the development and use of departmental budgets. Financial statements will be used to project future expenses and revenues for an organization and/or department. Emphasizes the reimbursement process for a managed care environment and purchasing procedures.

**HLT 226 Organizational Development in Health Care****3 Credits**

Prerequisites: BUS 105 - Principles of Management. Examines organizational structure in health care organizations including traditional structures and re-engineering of the health care industry. Covers staff development, training, job analysis and design and departmental staffing. Discusses medical ethics.

**HMS 101 Introduction to Human Services****3 Credits**

Prerequisites: None. Explores the history of human services, career opportunities and the role of the human service worker. Focuses on target populations and community agencies designed to meet the needs of various populations.

**HMS 102 Helping Relationship Techniques****3 Credits**

Prerequisites: None. Provides opportunities to increase effectiveness in helping people. Examines the helping process in terms of skills, helping stages and issues involved in a helping relationship. Introduces major theories of helping.

**HMS 103 Interviewing and Assessment****3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationships Techniques, or permission of the program chair. Develops skills in interviewing and provides a base for students to build personal styles. Introduces a variety of assessment approaches and treatment planning.

**HMS 104 Crisis Intervention****3 Credits**

Prerequisites: None. Provides beginning training for people who anticipate or are presently working in crisis situations.

**HMS 105 Introduction to Correctional Rehabilitation Services****3 Credits**

Prerequisites: None. Introduces the study of crime and criminals and how society is affected.

**HMS 106 Physiology of Aging****3 Credits**

Prerequisites: None. Focuses on the physical changes and common pathologies associated with the aging process. Includes the psychological and social implications of changes for human behavior. Focuses on health promotion and disease prevention.

**HMS 107 Human Services Topical Seminar****3 Credits**

Prerequisites: Approval of program chair. Discusses topics of current interest in human services. Focuses on special interest projects for students in human services. Utilizes field trips, guest speakers, audio-visual activities and seminars.

**HMS 108 Psychology of Aging****3 Credits**

Prerequisites: None. Covers the major behavioral changes in adulthood and aging. Students explore their own feelings about aging as well as the attitudes of society.

**HMS 112 Recreation for Special Populations****3 Credits**

Prerequisites: None. Studies the nature and etiology of impairments including developmental disabilities, mental illness, physical disabilities and geriatrics and their potential impact upon an individual's ability to participate in recreational activities. Explores techniques needed to conduct a recreation program which allows successful participation by an individual with a disability.

**HMS 113 Problems of Substance Abuse in Society****3 Credits**

Prerequisites: None. Provides basic information about alcohol and drugs and the laws which pertain to their abuse. Explores current attitudes and practices which pertain to alcohol and drug use, misuse and dependence. Class can be used toward ICAADA certification.

**HMS 114 Social Services in Long-Term Care****3 Credits**

Prerequisites: None. Provides practical and useful information about aging and institutionalization. Focuses on the role of social services within the long-term care facility. Indiana State Department of Health State Certification requires 48 hours of attendance.

**HMS 116 Introduction of Mental Retardation/Developmental Disabilities****3 Credits**

Prerequisites: None. Provides the participant with background knowledge of the field of mental retardation/developmental disabilities and issues pertinent to the field.

**HMS 120 Health and Aging****3 Credits**

Prerequisites: None. Provides an overview of the physical changes and common pathologies associated with the aging process. Focuses on the psychological and social implications of such changes for human behavior. Throughout the course there is a focus on health promotion and disease prevention during the later years.

**HMS 122 Introduction to Residential Treatment****3 Credits**

Prerequisites: None. Introduces information, skills and attitudes necessary to become an effective worker in residential treatment. Explores basic developmental needs, planning and use of activities and issues related to the team approach. Discusses and demonstrates observation and recording of behavior.

**HMS 124 Activity Director Basic****6 Credits**

Prerequisites: None. Explores the philosophy and investigates the development of therapeutic activity programs for older persons. Focuses on activities which will meet the individual's physical, social and emotional needs.

**HMS 130 Social Aspects of Aging****3 Credits**

Prerequisites: None. Covers major theories and patterns of aging in American society. Covers social institutions and cultural factors that affect the aging process.

**HMS 140 Loss and Grief****3 Credits**

Prerequisites: None. Provides practical and useful information for everyone who has experienced a loss. Addresses the problems of loss and grief and how to develop coping skills. Students will evaluate their own experiences and attitudes toward loss and grief.

**HMS 201 Internship I****4 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationships Techniques, and HMS 103 - Interviewing and Assessment, or program advisor approval. Corequisites: HMS 203 - Internship Seminar I. A field work experience in an approved social, educational, law enforcement, corrections or other community service organization. The student will be supervised by an internship site professional and a college faculty member. A minimum of 180 hours of work experience is required.

**HMS 202 Internship II****4 Credits**

Prerequisites: HMS 201 - Internship I, HMS 203 - Internship Seminar I, HMS 205 - Behavioral/Reality Techniques, HMS 206 - Group Process and Skills or program advisor approval. Corequisites: HMS 204 - Internship Seminar II. Continues Internship I. A minimum of 180 hours of work experience is required.

**HMS 203 Internship Seminar I****3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationships Techniques, HMS 103 - Interviewing and Assessment, or program advisor approval. Corequisites: HMS 201 - Internship I. Permits small group discussion and analysis of the human services internship experience. Includes special learning objectives related to the kind of work the student does after completing the program.

**HMS 204 Internship Seminar II****3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationships Techniques, HMS 103 - Interviewing and Assessment, HMS 201 - Internship I, HMS 203 - Internship Seminar I or program advisor approval. Corequisites: HMS 202 - Internship II. Continues Internship Seminar I with different learning objectives. Relates objectives to the work the student does after completing the program.

**HMS 205 Behavioral/Reality Techniques****3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationships Techniques, HMS 103 - Interviewing and Assessment. Focuses on theories of behavioral and reality approaches. Develops understanding of terms and practical applications of the behavioral and reality approaches used in working with people.

**HMS 206 Group Process and Skills****3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, HMS 103 - Interviewing and Assessment, or permission by program chairperson. Studies group dynamics, issues, and behavior. Includes group functioning and leadership, guidelines on working effectively with a co-leader, and practical ways of evaluating the group process.

**HMS 207 Program Planning/Policy Issues****3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, HMS 103 - Interviewing and Assessment, or program advisor approval. Concentrates on the components of administration of human service agencies. Addresses practitioner skills needed by an administrator or supervisor. Discusses social policy issues and their impact on human services.

**HMS 208 Treatment Models of Substance Abuse****3 Credits**

Prerequisites: HMS 113 - Problems of Substance Abuse in Society or program advisor approval. Describes the various treatment models used with chemically dependent clients. Discussion centers on intervention and treatment models for chemical dependency and their role in the recovery process. Course can be applied toward hours for ICAADA certification.

**IMS 209 Counseling Issues****3 Credits**

Prerequisites: HMS 113 - Problems of Substance Abuse in Society or program advisor approval. Explores practice strategies for the worker who counsels chemically dependent clients. Course can be applied toward hours for ICAADA certification.

**IMS 210 Co-Dependency****3 Credits**

Prerequisites: HMS 113 - Problems of Substance Abuse in Society or program advisor approval. Presents the definitions of codependency and the issues related to it. Students learn skills and techniques to confront codependent behavior. Course can be applied toward hours for ICAADA certification.

**IMS 215 Juvenile Delinquency****3 Credits**

Prerequisites: None. Provides an overview of the concepts, definitions and measurements of juvenile delinquency. Explores various theories which attempt to explain the causes of delinquency. Looks at the role of environmental influences (peers, gangs, school, drugs, etc.) as they contribute to delinquency. Discusses an overview of the history and philosophy of the juvenile justice system as well as ways to control and treat juvenile delinquents.

**IMS 220 Issues and Ethics in Human Services****3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, HMS 103 - Interviewing and Assessment. Provides an introductory overview of the legal and ethical aspects in the field of human services with implications for the human services worker. Included are such topics as liability, confidentiality and privilege, records and rights of clients, due process and equal protection in terms of staff and client, discrimination and witnessing.

**HMS 240 Rehabilitation Process: Probation and Parole****3 Credits**

Prerequisites: HMS 105 - Introduction to Correctional Rehabilitation Services or program advisor approval. Provides an understanding of probation and parole as an integral part of the criminal justice system with special emphasis on current and future trends in this area. Explores the role of community corrections and its impact on the role of probation and parole in our society in view of the increase in the number of offenders.

**HMS 281-294 Special Topics in Human Services****1-5 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, and HMS 103 - Interviewing and Assessment. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**HMT 100 Occupational Safety and Health Administration (OSHA) Regulations****3 Credits**

Prerequisites: None. Provides a study of the U.S. Occupational Safety and Health Administration's (OSHA) regulations which protect workers from exposure to occupational hazards. Concentrates on researching, interpreting, summarizing and applying the OSHA regulations for workers who handle hazardous materials.

**HMT 104 Environmental Toxicology****3 Credits**

Prerequisites: None. Reviews research conducted to determine the systematic health effects of exposures to chemicals. Includes determination of risk factors, routes of entry of hazardous materials, and their effects on target organs, acute, and chronic effects and control measures.

**HMT 120 Hazard Communication Standard****3 Credits**

Prerequisites: None. Provides instruction concerning the development and implementation of a hazard communication program for employees. Provides experience in conducting a chemical inventory, interpreting material safety data sheets (MSDSs), developing a written hazard communication program that complies with 29CFR 1910.1200 and conducting an effective hazard communication training program.

**HMT 200 Environmental Protection Agency (EPA) Regulations****3 Credits**

Prerequisites: HMT 100 - Occupational Safety and Health Administration (OSHA) Regulations. Provides a detailed study of the U.S. Environmental Protection Agency (EPA) regulations pertaining to hazardous waste management with an emphasis on the requirements of the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response Compensation Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA).

**HMT 201 Contingency Planning****3 Credits**

Prerequisites: None. Teaches students to develop an emergency response contingency plan for a facility or community. Includes analyzing the hazards, writing and implementing the contingency plans, training employees for an emergency and evaluating the effectiveness of the contingency plan.

**HMT 203 Sampling Procedures****3 Credits**

Prerequisites: HMT 100 - Occupational Safety and Health Administration, HMT 120 - Hazard Communication Standard, and HMT 200 - Environmental Protection Agency Regulations. Introduces students to a variety of sampling procedures used in industrial settings and for emergency response. Includes sampling and monitoring devices, industrial hygiene monitoring, water and waste stream monitoring, outside air sampling, soil sampling and radiation. Emphasizes collecting and preserving representative samples, interpreting laboratory results and complying with relevant federal regulations.

**HMT 205 Department of Transportation (DOT) Regulations****3 Credits**

Prerequisites: HMT 100 - Occupational Safety and Health Administration. Provides a detailed study of the U.S. Department of Transportation (DOT) regulations. Introduces certain Nuclear Regulatory Commission and Environmental Protection Agency regulations pertinent to hazardous materials transportation. Includes problems and case studies in which students identify and interpret applicable DOT regulations and recommend compliance strategies. Provides practical understanding of DOT issues through interviews with local professionals in hazardous materials handling.

**HMT 220 Hazardous Materials Recovery, Incineration and Disposal****3 Credits**

Prerequisites: CHM 101 - Chemistry I. Explains methods of recovery, incineration and/or disposal of hazardous waste. Includes contracting with qualified disposal organizations, obtaining permits and ensuring regulatory compliance of hazardous waste.

**HOS 101 Sanitation and First Aid****3 Credits**

Prerequisites: None. Helps students learn basic principles of sanitation and safety in order to maintain a safe and healthy food service environment. Presents the laws and regulations related to safety, fire and sanitation and how to adhere to them in the food service operation.

**HOS 102 Basic Foods Theory and Skills****3 Credits**

Prerequisites: None. Students learn the fundamentals of food preparation, service procedures, and sanitation and safety practices in the food service business. They will use proper operation techniques for equipment. This course also provides a background and history of the hospitality industry and introduces the student to the broad spectrum of hospitality/food service organizations and career opportunities. Students will be familiarized with the organizational structure and basic functions of departments.

**HOS 103 Soups, Stocks and Sauces****3 Credits**

Prerequisites: None. Concentrates on the four major stocks and the soups that are derived from them. Time will be given to help develop the necessary skills to prepare food using any one of the 14 major cooking methods.

**HOS 104 Nutrition****3 Credits**

Prerequisites: None. Introduces the characteristics, functions and food sources of the major nutrient groups and how to maximize nutrient retention in food preparation and storage. Students will be made aware of nutrient needs throughout the life cycle and to apply those principles to menu planning and food preparation.

**HOS 105 Introduction to Baking****3 Credits**

Prerequisites: None. Presents fundamentals of baking science, terminology, ingredients, weights and measures, yeast goods, pies, cakes, cookies and quick breads and use and care of equipment. Emphasizes sanitation, hygienic work habits and conformity with health regulations.

**HOS 106 Pantry and Breakfast****3 Credits**

Prerequisites: HOS 103 - Soups, Stocks and Sauces. Covers the techniques and skills needed in breakfast cookery, as well as insight into the pantry department. Various methods of preparation of eggs, pancakes, waffles and cereals will be discussed. Students will receive instruction in salad preparation, salad dressings, hot and cold sandwich preparation, garnishes and appetizers.

**HOS 107 Hospitality Computer Systems****3 Credits**

Prerequisites: None. Provides an overview of the information needs of lodging properties and food service establishments and addresses essential aspects of computer systems and computer based property management systems for both front office and back functions. Focuses on computer-based restaurant management systems for both service-oriented and management-oriented functions.

**HOS 108 Table Service****3 Credits**

Prerequisites: None. Provides students with practical knowledge and skills of various types of service operations. The student will gain knowledge and an appreciation of the relationship between "front" and "back" of the house. Emphasis is also placed on management skills needed for bar and dining room management.

**HOS 109 Hospitality Purchasing****2 Credits**

Prerequisites: None. Studies in detail major groups of food purchased by quantity buyers including fresh fruits and vegetables, dairy products, meats and seafood, processed products, beverages and non-food items. Outlines the essentials of effective food and beverage control while establishing systems for sale values for food and beverages.

**HOS 114 Hospitality Organization and Administration****3 Credits**

Prerequisites: None. Analyzes management's functions and responsibilities as they pertain to the hospitality industry. Appropriate styles of hospitality leadership are covered.

**HOS 115 Diet Therapy****4 Credits**

Prerequisites: None. Presents to food services employees or prospective employees of health care institutions knowledge about basic nutrition, therapeutic diets and menu planning; students use knowledge by writing menus. Practicum required as an integral part of the course.

**HOS 116 Dietary Management I****4 Credits**

Prerequisites: None. Includes specifications, storage, purchasing and storage, feeding in emergencies, sanitation, and safety in a format designed for food service required as an integral part of the course.

**HOS 117 Dietary Management II****4 Credits**

Prerequisites: None. Includes specifications, storage, purchasing and preparation of food, recipe standardization, kitchen designs and delivery systems in format designed for food service employees or employees of health care institutions. Practicum required as an integral part of the course.

**HOS 118 Resident Clinical Assessment Practicum****4 Credits**

Prerequisites: None. Introduces the student to the residential care environment and provides the opportunity for the student to learn how to complete residential nutritional status assessments, evaluate resident nutritional needs, complete the required resident evaluation instruments and to write appropriate nutrition care.

**HOS 128 Total Quality Management (TQM) In Restaurant Operations****3 Credits**

Prerequisites: None. Provides students with practical knowledge and skills of restaurant operations through TQM. Emphasis is placed on forming an organizational team from traditional "front and back-of-the house" roles. In addition various types of service for food and beverages are taught to demonstrate the versatility of the industry.

**HOS 131 Techniques of Casino Games: Craps****9 Credits**

Prerequisites: None. Emphasizes fundamentals of dealing the game of Craps: chip handling and cutting, call bets, procedures, accuracy, and game speed. Requires the development of quick mental multiplication and game speed, and knowledge of all bets and procedures for payoffs. Special attention is paid to the managerial aspects of Craps.

**HOS 132 Techniques of Casino Games: Blackjack****6 Credits**

Prerequisites: None. Emphasizes fundamentals of dealing the game of Blackjack: chip handling and cutting, shuffling, card delivery, call bets, procedures, accuracy and game speed. Special attention is paid to the managerial aspects of Blackjack.

**HOS 141 Introduction to Casino Operations****3 Credits**

Prerequisites: None. Concentrates on the basic rules, fundamentals and procedures of all the revenue producing areas of a modern casino. Covers table games, slots, race and sports betting, bingo and keno. Includes an overview of other pertinent casino areas such as casino cage and surveillance. Introduces casino math, game operations and protection.

**HOS 144 Customer Relations****3 Credits**

Prerequisites: None. Examines the key principles of quality service by understanding the service product, the service environment, the tools of service, the service needs of the customer and the application of service principles.

**HOS 150 The Tourism System****3 Credits**

Prerequisites: None. Studies travel trends and modes and the social, environmental and economic impacts on the destination area. Emphasis is placed on local, regional and national tourism.

**HOS 151 Introduction to Convention/Meeting Management****3 Credits**

Prerequisites: None. Provides a general overview of the convention, exposition and meeting industry, and explores the career options within the industry. Includes an essential understanding of the components involved in the operation of successful meetings and conventions.

**HOS 152 The Mechanics of Meeting Planning****3 Credits**

Prerequisites: None. Provides an in-depth study of the meeting and convention industry. Focuses on the operational aspects of the various industry segments and the intra-industry interactions of each. The text is one of the main components used to study for the Certified Meeting Professional (CMP) examination.

**HOS 153 The Development and Management of Attractions****3 Credits**

Prerequisites: None. Examines the process of developing visitor attractions and discusses the issues involved in their management. Course content contains information geared toward achieving certain competency objectives.

**HOS 201 Hospitality Organization and Human Resources Management****3 Credits**

Prerequisites: None. Teaches the necessary skills for proper recruiting, staffing, training and managing employees at various levels in hospitality careers. Emphasizes the organization's evolutionary and problem solving process.

**HOS 202 Garde Manger****3 Credits**

Prerequisites: HOS 106 - Pantry and Breakfast. Illustrates basic garde manger principles and the functions and duties of the garde manger department as they relate and integrate with other kitchen operations. Students will focus on introduction to specialty work which includes ice carving, artistic centerpieces and buffet decorations. They will demonstrate equipment and garde manger area planning.

**HOS 203 Menu, Design, and Layout****2 Credits**

Prerequisites: None. Provides the skills needed to apply the principles of menu planning to various types of facilities and services. This course covers menu layout, selection and development and pricing structures.

**HOS 204 Food and Beverage Cost Control****2 Credits**

Prerequisites: None. Introduces mathematical principles applied to the food service industry and uses skills to complete food related tasks.

**HOS 205 Food and Beverage Cost Control Applications****1 Credit**

Prerequisites: None. Covers the principles and procedures involved in an effective system of room, food, beverage, labor and sales income. Emphasizes the development and use of standards in the calculation of cost.

**HOS 206 Fundamentals of the Catering Business****3 Credits**

Prerequisites: HOS 101 - Sanitation and First Aid and FST 102 - Food Service Equipment Operations. Introduces the fundamentals of owning and operating a small catering business including personal, legal and operational requirements.

**HOS 207 Advanced Baking and Chocolates****3 Credits**

Prerequisites: None. Covers classical French and European desserts. Includes the preparation of goods such as Napoleons, Gateaux St. Honore, petits fours and petits fours sec, ganaches, pastry creams and fillings, sauces, flans and tarts and European sponges. Includes tempering of chocolates, molding and chocolate plastique, preparation of truffles, pastilage and marzipan, short doughs, and meringues. Requires students to submit three pieces from the American Culinary Federation approved individual pastry display category to be judged as a final practical exam.

**HOS 214 Hospitality Law and Security****3 Credits**

Prerequisites: None. Provides an awareness of the rights and responsibilities that the law grants to or imposes upon a hotel keeper. Illustrates the possible consequences of failure to satisfy legal obligations.

**HOS 216 Hospitality Marketing and Group Sales****3 Credits**

Prerequisites: None. Presents a practical understanding of the operating statement and precisely where, how and why the sales effort fits into total earnings and profit. Teaches how to measure and gauge accurately the precise worth of every type of business in advance.

**HOS 221 Catering Administration****3 Credits**

Prerequisites: HOS 101 - Sanitation and First Aid, CUL 110 - Meat Cutting, HOS 204 - Food and Beverage Cost Control, and CUL 202 - Specialized Cuisine. Provides instruction in the fundamentals of catering including the business of supplying food, goods and organized service for public and private functions. Includes staffing, equipment, transportation, contracting, special arrangements, beverage service and menu planning. Demonstrates techniques of setting up banquets and buffets. Requires students to plan, budget, cost, test recipes and formats, plan decor, service and entertainment for catered events.

**HOS 231 Techniques of Casino Games: Craps-Subsequent****7 Credits**

Prerequisites: HOS 131 - Techniques of Casino Games: Craps or HOS 133 - Techniques of Casino Games: Roulette. Emphasizes fundamentals of dealing the game of Craps: chip handling and cutting, call bets, procedures, accuracy and game speed. Requires the development of quick mental multiplication and game speed and knowledge of all bets and procedures for payoffs. Special attention is paid to the managerial aspects of Craps.

**HOS 232 Techniques of Casino Games: Blackjack-Subsequent****5 Credits**

Prerequisites: HOS 132 - Techniques of Casino Games: Blackjack or HOS 133 - Techniques of Casino Games: Roulette. Emphasizes fundamentals of dealing the game of Blackjack: chip handling and cutting, shuffling, card delivery, call bets, procedures, accuracy and game speed. Special attention is paid to the managerial aspects of Blackjack.

**IOS 233 Techniques of Casino Games: Roulette-Subsequent****6 Credits**

Prerequisites: HOS 133 - Techniques of Casino Games: Roulette. Emphasizes fundamentals of dealing the game of Roulette: chip handling and cutting, all bets, procedures, accuracy and game speed. Requires the development of quick mental multiplication and game speed and knowledge of all bets and procedures for payoffs. Special attention is paid to the managerial aspects of Roulette.

**IOS 242 Casino Supervision****3 Credits**

Prerequisites: None. Provides an in-depth study of casino management techniques used in gaming both locally and nationwide. Emphasizes the duties and responsibilities of the mid-level casino supervisor and the casino executive. Includes duties of floor, pit and shift managers. Stresses game protection, credit and marker control, cash and check control and internal regulatory procedures.

**IOS 244 Slots Management****3 Credits**

Prerequisites: None. Emphasizes basic slots managerial techniques including supervision of slot shift managers, mechanics, technicians, floor personnel, change persons, booth cashiers, carousel attendants, coin room operators, jackpot fills and credits.

**HOS 245 Casino Surveillance****3 Credits**

Prerequisites: None. Studies all aspects of modern casino surveillance including all table games, slots, cage, keno, and all areas of the casino. Increases the students' familiarity with regulations, criminal laws, rules of evidence and game protection, fostering both knowledge and professionalism within the work place.

**HOS 280 Co-op/Internship/Externship/Practicum****3 Credits**

Prerequisites: None. Requires students to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

**HOS 281-294 Special Topics in Hospitality Administration****1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**HRM 202 Front Office****3 Credits**

Prerequisites: None. Presents a systematic approach to front office procedures, detailing the flow of business through a hotel beginning with the reservation process and ending with billing and collection procedures within the context of the overall operation of a hotel. Examines front office management, the process of handling complaints, and concerns regarding hotel safety and security.

**HRM 206 Supervisory Housekeeping****3 Credits**

Prerequisites: None. Introduces the fundamentals of housekeeping management. Emphasis is placed on employee training, record-keeping, health and safety cost control and overall responsibilities.

**IDS 102 Introduction to Print Reading****3 Credits**

Prerequisites: None. Provides an introduction to reading and interpreting machine shop symbols, welding blueprints and working drawings used in trades and crafts. Focuses on dimension, shape, fabrication and assembly. Applies basic mathematics to the solution of print and performance problems.

**IDS 103 Motors and Motor Controls****3 Credits**

Prerequisites: TEC 113 - Basic Electricity. Provides a complete understanding of all types of electric motors, extending from the small shaded pole fan motors to the large three-phase motors. Includes motor theory magnetism and how it affects motor rotation. Provides in-depth study of motor starting components and protective devices for motor circuits. Includes heat dissipation from a motor, motor slippage, how motors are wired to obtain different speeds, and capacitors and how they affect a motor circuit.

**IDS 104 Fluid Power Basics****3 Credits**

Corequisites: MAT 050 - Basic Algebra or advisor approval. Introduces the student to fluid power principles and components. Teaches basic circuit design, symbols and schematic diagrams to build a foundation for career work in fluid power technology.

**IDS 114 Introductory Welding****3 Credits**

Prerequisites: None. Provides basic skills and fundamental knowledge in oxyacetylene and shielded metal welding for maintenance welders, auto service and body technicians and individuals in the mining industry. Emphasizes industry welding practices and detailed study of techniques used in all weld positions. Covers brazing and flame cutting and electrode selection and uses. Emphasizes safe practices in welding, cutting and shielded metal arc.

**IDS 260 - Quality Control and Advanced Problem Solving****3 Credits**

Prerequisites: Completion of 45 credit hours in the program including ENG 111 - English Composition and MAT 111 - Intermediate Algebra or advisor approval. Covers critical thinking skills, data collection, analyzing data, problem solving and decision analysis techniques as they apply to a technological environment. Includes at least one substantive problem-solving project that includes a mathematics component and requires a written report.

**IDS 280 Co-op/Internship****3 Credits**

Prerequisites: Students must have completed a minimum of 30 credits toward their degrees with a least a 3.0 cumulative grade point average. Gives students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward and associate degree.

**IDS 281-294 Special Topics in Industrial Technology****1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**ILT 101 Industrial Laboratory Techniques****3 Credits**

Prerequisites: None. Deals with basic skills needed in the industrial laboratory such as safety, identification, care and operation of basic laboratory equipment including pH meters, spectrophotometers, glassware and definition and preparation of reagents. Includes laboratory exercises in the use of selected equipment.

**ILT 201 Industrial Instrumentation and Techniques I****3 Credits**

Prerequisites: ILT 101 - Industrial Laboratory Techniques and CHM 101 - Chemistry I. Addresses theoretical aspects of industrial laboratory instrumentation including gas and liquid chromatography (GC and LC), high performance liquid chromatography (HPLC), infra-red (IR) spectrophotometry and atomic absorption (AA). Presents theories and laws that govern the way instruments operate. Includes student experimentation on various analytical instruments.

**ILT 202 Industrial Instrumentation and Techniques II****3 Credits**

Prerequisites: ILT 201 - Industrial Instrumentation and Techniques I. Continues the theoretical study of ILT 201 by addressing industrial applications of laboratory instrumentation including gas and liquid chromatography (GC and LC), high performance liquid chromatography (HPLC), infra-red (IR) spectrophotometry and atomic absorption (AA). Presents automation techniques including sampling, data collection and analysis. Covers the laws that govern the way instruments operate. Includes student experimentation on various analytical instruments.

**ILT 203 Environmental Monitoring****3 Credits**

Prerequisites: Advisor approval. Deals with aspects of environmental pollution, providing a realistic and objective view of pollution problems. Includes the role of technology in the identification of environmental pollution.

**ILT 206 Food and Drug Analysis****3 Credits**

Prerequisites: Advisor approval. Examines the food processing industry. Includes various analytical techniques and quality control standards utilized by the food industry. Includes classification of drugs and various methods of purification. Covers instruments and procedures used to monitor the quality and quantity of the composition of a product.

**ILT 217 Wastewater Analysis****3 Credits**

Prerequisites: Advisor approval. Deals with the chemical and biological analysis of wastewater. Major pollutants of water are determined and quantified. The wastewater treatment steps are discussed to determine ideal lab sampling locations. Various wastewater tests such as BOD's, COD's, sedimentation rates and biological examinations are performed.

**IMT 105 Heating and Air Conditioning Basics****3 Credits**

Prerequisites: None. Presents fundamentals of heating and compression systems used in mechanical refrigeration and air conditioning. Includes combustion process, heat flow, temperature measurement, gas laws, heating and refrigeration cycles and components used in systems. Introduces basic mechanical service procedures used in industry.

**IMT 106 Millwright I****3 Credits**

Prerequisites: Advisor approval. Introduces the proper use of hand and power tools and measuring instruments in carpentry, blacksmithing, rigging and equipment, machinist and general shop. Includes structural steel and fabricating terms.

**IMT 107 Preventive Maintenance****3 Credits**

Prerequisites: Advisor approval. Focuses on detecting and correcting potential trouble spots and scheduling routine inspections with checklists. Studies five essential forms of preventive maintenance: equipment record, checklist, inspection schedule, inspection report and equipment cost record.

**MT 108 Measurements and Calibration****3 Credits**

Prerequisites: Advisor approval. TEC 113 - Basic Electricity. Provides instruction in the purpose, function and application of oscilloscopes and related instruments.

**MT 110 Coupling and Alignment****3 Credits**

Prerequisites: None. Introduces the concepts of correct alignment of industrial process machinery. Provides instruction in troubleshooting and repair of coupled machines.

**IMT 111 Rigging****3 Credits**

Prerequisites: None. Introduces the proper techniques of moving industrial machinery and equipment. Emphasis is placed on proper installation, inspection, safety requirements and load calculation.

**IMT 112 Sheet Metal Layout and Design****3 Credits**

Prerequisites: None. Examines the procedures used to layout sheet metal components. Presents the proper use of hand and machine tools to fabricate sheet metal projects.

**IMT 120 Metallurgy Fundamentals****3 Credits**

Prerequisites: None. Studies the fundamentals of thermodynamics and reactions occurring in metals subjected to various kinds of heat treatment. Includes classification and properties of metals, chemical and physical metallurgy, theory of alloys, heat treatment principles as applied to ferrous and non-ferrous materials, test to determine uses, heat treatment for steels, special steels, and cast iron, powder metallurgy, and use of gas and electric furnaces and their controls.

**IMT 122 Electrical Wiring Fundamentals****3 Credits**

Prerequisites: None. Covers National Electrical Code and its relationship to residential and commercial wiring. Includes mechanical installation of hardware, metering equipment, lights, switches and design. Discusses tool use and materials selection.

**IMT 201 Fluid Power Systems (Hydraulics/Pneumatics)****3 Credits**

Prerequisites: IDS 104 - Fluid Power Basics. Introduces the student to more complex fluid power circuits. Requires students to design, analyze and troubleshoot complex circuits using schematic diagrams. Studies detailed construction of typical industrial fluid power components. Teaches students to disassemble and evaluate fluid power components in the lab.

**IMT 203 Machine Maintenance/Installation****3 Credits**

Prerequisites: None. Examines procedures for the removal, repair and installation of machine components. Analyzes methods of installation, lubrication practices and maintenance procedures for industrial machinery. Presents techniques for calibration and repair of electro-mechanical devices and practice in computations pertaining to industrial machinery.

**IMT 205 Programmable Controllers I****3 Credits**

Prerequisites: Program advisor approval. Introduces the basic theory, operation and programming of programmable controllers. Includes pilot control devices, circuit layouts, industrial schematics, relay logic, reduced voltage starters and multi-speed controllers. Covers static control systems. Demonstrates with programming examples, set-up examples and troubleshooting as well as PLC timing, counting, arithmetic and logic.

**IMT 206 Programmable Controllers II****3 Credits**

Prerequisites: IMT 205 - Programmable Controllers I. Provides an in-depth study of programmable controllers. Emphasizes program language installation, maintenance and applications.

**IMT 207 Electrical Circuits****3 Credits**

Prerequisites: IDS 103 - Motors and Motor Controls, MAT 121 - Geometry-Trigonometry or advisor approval, TEC - 113 Basic Electricity. Provides fundamentals of single- and three-phase alternating current including parallel circuits, resistance, inductance, capacitance, switching, fusing, current requirements, transformer applications, and motors and motor controls. Covers the basics of mechanical and electrical installations, emphasizes tool use and material selection and electrical troubleshooting diagnosis and repair.

**IMT 210 Pumps****3 Credits**

Prerequisites: IDS 104 - Fluid Power Basics. Covers the construction and operation of centrifugal, reciprocating and rotary pumps and their components. Includes procedures of troubleshooting, installation and maintenance.

**IMT 211 Advanced Industrial Mechanics I****3 Credits**

Prerequisites: IDS 103 - Motors and Motor Controls, IMT 122 - Electrical Wiring Fundamentals, IMT 201 - Fluid Power Systems, IMT 203 - Machine Maintenance/Installation, and PHY 101 - Physics I. Examines the operation and design of mechanical systems including belt drives, chain drives, gear boxes, bearings and variable speed drives. Includes the proper use of portable power tools and the study of different materials.

**IMT 212 Advanced Industrial Mechanics II****3 Credits**

Prerequisites: IMT 211 - Advanced Industrial Mechanics I. Continues Advanced Industrial Mechanics I with troubleshooting of the various mechanical drive systems. Includes the study of lubrication, seals, industrial pumps, steam distribution systems and HVAC systems.

**IMT 213 Pipe Fitting Basics****3 Credits**

Prerequisites: IDS 102 - Introduction to Print Reading. Acquaints the maintenance technician with a basic foundation and pipe fitting skills necessary to make repairs or new pipe layout. Includes determination of the type and quantity of material needed to complete a task and joining those materials in the proper manner with a minimum of supervision.

**IMT 215 Power Plant Mechanics****3 Credits**

Prerequisites: IMT 207 - Electrical Circuits, MAT 111 - Intermediate Algebra. Presents the basic elements in the power plant: their function, their mode of operation and the mechanics, with emphasis on construction and repair. The student selects, troubleshoots and repairs power plant mechanics.

**INS 210 Property and Liability Insurance Principles****3 Credits**

Prerequisites: ENG 025 - Introduction to College Writing II, ENG 032 - Reading Strategies for College II, MAT 044 - Mathematics or demonstrated competencies or advisor approval. Provides an overview of the insurance business and an understanding of the basic principles of property and liability insurance.

**INS 220 Personal Insurance****3 Credits**

Prerequisites: INS 210 - Property and Liability Insurance Principles or advisor approval. Analyzes personal loss exposures and insurance including homeowners and other dwelling coverages, personal liability, inland marine, auto, life, health insurance and financial planning.

**INS 230 Commercial Insurance****3 Credits**

Prerequisites: INS 220 - Personal Insurance or advisor approval. Explores commercial coverages and loss exposures including property, business income, marine, crime, boiler and machinery, general liability, auto, workers compensation, business owners, miscellaneous coverages and surety bonding.

**INT 101 Interior Design Theory****3 Credits**

Prerequisites: None. Introduces design theory and color dynamics as applied to interior composition. Includes exploration and application of three-dimensional entourage, human factors and the psychology and social influences of space.

**INT 102 Residential Drafting and Construction****3 Credits**

Prerequisites: None. Provides an understanding of building structures, residential construction techniques, building materials and blueprint reading. Includes building codes and the preparation of plans, elevations, sections and details as they relate to construction drawings.

**INT 103 Introduction to Interior Design****3 Credits**

Prerequisites: None. Provides students with an overview of the field of interior design. Exercises include small-scale space analysis and functional planning based on user needs, application of the principles of design, furniture arrangement, finish selections and presentation techniques.

**INT 104 Textiles for Interiors****3 Credits**

Prerequisites: None. An intensive study of textiles from fiber identification and classification to finish. Also introduces interior textile fabrications including window treatments, upholstery, carpet and wallcoverings.

**INT 105 Design Presentations****3 Credits**

Prerequisites: Permission of program chair. Presents the elements of two-and three-dimensional design concepts as related to interior representational drawings. Studies include audio-visual techniques, color rendering and material boards for client presentations.

**INT 107 Color and Light****3 Credits**

Prerequisites: None. Introduction of color theory, including additive and subtractive systems. Covers the effects of various types of lighting on color.

**INT 108 Interior Design II****3 Credits**

Prerequisites: INT 102 - Residential Drafting and Construction. Presents concept development, programming and space planning of the interior environment. Exercises reinforce creativity and problem solving skills. Emphasizes the relationship between individuals and their surroundings, including studies in human scale, proxemics and design considerations for special populations.

**INT 109 History of Interiors****3 Credits**

Prerequisites: None. Survey of the development of the interrelationship of architecture, interiors, furniture and decorative arts. Includes the designers who created these environments.

**INT 201 Interior Finishes****3 Credits**

Prerequisites: INT 102 - Residential Drafting and Construction, INT 103 - Introduction to Interior Design, INT 104 - Textiles for Interiors. Examines the physical properties of various finish materials and architectural detailing including floor and wall treatments. Addresses problems in specifying, estimating and installing these materials.

**INT 202 Contract Design****3 Credits**

Prerequisites: Permission of program chair. Studies include commercial technological and base building requirements; barrier-free, building and life safety codes; analysis of existing conditions, client interview and square footage and space planning standards. Emphasis is on task analysis and workstation design, systems and equipment manufacturers and finish selections within the office.

**INT 203 Professional Practice****3 Credits**

Prerequisites: Permission of program chair. Introduction to business principles and practices as they relate to the interior design profession. Includes business formation and management, professional ethics and organizations, certification and licensing, design liability and project management. Special topics involving consumer behavior, sales techniques and fee structuring will also be addressed.

**INT 204 Interior Design III****3 Credits**

Prerequisites: Permission of program chair. Students select a competency project related to their individual interests with scope of project approved by faculty. The project design solution is expected to include professional interior design research and practices including programming, concept development, space planning, all necessary working drawings and specifications and appropriate presentation materials.

**INT 206 Custom Design in Interiors****3 Credits**

Prerequisites: Permission of program chair. Creative development of original design for interior furnishings, textiles, window treatments and accessory pieces. Includes material selection, budget estimation, construction constraints, estimating and installation techniques and presentation methods.

**INT 207 Commercial Interior Detailing****3 Credits**

Prerequisites: INT 102 - Residential Drafting and Construction. Presents the integration of commercial and institutional interior design and architectural detailing. Includes the impact of mechanical and electrical systems, acoustics and codes. Special emphasis will be placed on lighting technology and application.

**INT 208 CAD for Interior Design****3 Credits**

Prerequisites: Permission of program chair. Investigation of the concepts, techniques and skills required for computer-aided drafting. Students will learn efficient productivity of visual information: set-up, drawing methods, editing, zooming, dimensioning, block drawing and print/plotting of graphic input.

**INT 209 Portfolio Preparation****3 Credits**

Prerequisites: Permission of program chair. Efforts are directed toward achieving a career in interior design. Includes a comprehensive program assessment exam, the development of a high-quality portfolio and résumé and necessary field experience.

**INT 210 Project Management****3 Credits**

Prerequisites: Permission of program chair. In conference with a faculty advisor, students select an interior design project. The project should include all phases of project programming, analysis of existing conditions, design criteria and adjacency studies, schematic and design development, contract documentation and administration and the final project presentation. A signed contract must be filed with the department chairperson prior to enrollment.

**INT 211 Kitchen and Bath Design****3 Credits**

Prerequisites: Permission of program chair. Involves the requirements and space planning for kitchens and baths, utilizing both standard and custom cabinetry and fixtures. Topics also include casework for media and conference centers.

**INT 212 Historic Preservation****3 Credits**

Prerequisites: Permission of program chair. Introduces the process of establishing historic properties. Preservation, restoration and adaptive reuse will be differentiated as applied to both public and private properties. Includes appropriate exterior and interior color and finish selections and architectural detailing.

**INT 213 Internship I****1-3 Credits**

Prerequisites: Permission of program chair. Field placement or research project within students' occupational specialty, to include collection and analysis of data and work experience in business and industry.

**INT 214 Hospitality Design****3 Credits**

Prerequisites: Permission of program chair. Introduces the special considerations in designing for the hospitality industry. Includes the intricacies of a restaurant layout from the furniture arrangement to personnel traffic patterns in meeting, dining and guestrooms and common areas.

**INT 215 Independent Study****3 Credits**

Prerequisites: Permission of program chair. Accommodates student's interest in specific areas or where there is a need to strengthen skills. Program chairperson's approval is required and a signed contract must be filed prior to enrollment.

**INT 217 Retail Design****3 Credits**

Prerequisites: Permission of program chair. Introduces principles of display and special techniques and equipment required in display work.

**INT 218 Health Care Facilities Design****3 Credits**

Prerequisites: Permission of program chair. Introduces the interior design of the health care environment. Includes such considerations as planning health and safety codes, finishes, equipment and furnishings specific to health care facilities installations.

**INT 219 Special Projects****3 Credits**

Prerequisites: Permission of program chair. Students experience special projects individually or in a team situation. A signed contract must be filed with the program chairperson prior to enrollment.

**INT 280 Co-op/Internship****1-6 Credits**

Prerequisites: None. Students work at job sites that are specifically related to career objectives. Provides on-the-job experience while earning course credit.

**INT 281-294 Special Topics in Interior Design****1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact the program chair for more information.

**IVY 100 Prior Learning Assessment****3 Credits**

Prerequisites: None. Provides students an opportunity to document and present college level learning which has resulted from work/life experience. At the conclusion of this course students will submit a complete learning portfolio which consists of a request for college credits along with a detailed description of college level competencies for each course and documentation to support their request.

**LEG 101 Introduction to Paralegal Studies****3 Credits**

Prerequisites: Must be program-ready in English (both reading and writing). Introduces the beginning student to the American legal system, substantive and procedural law, and the role of the paralegal in the legal profession. Topics include professional ethics, legal analysis and research, trial and appellate courts, civil and criminal trial procedure and brief surveys of the substantive law of torts, contracts, property and criminal law. Projects include an IRAC brief, library research of a statute and related case and drafting a summons, complaint and answer.

**LEG 102 Legal Research and Writing****3 Credits**

Prerequisites: LEG 101 - Introduction to Paralegal Studies. Introduces the student to library research resources including case reporters, digests, statutes and administrative codes, registers, law encyclopedias and other secondary authorities. Students are instructed on effective research strategies, proper citation form and Shepard's updating service. The final research and writing project is a memorandum of law.

**LEG 103 Civil Procedures****3 Credits**

Prerequisites: LEG 101 - Introduction to Paralegal Studies. The first of two semesters devoted to the study of the Indiana trial rules, small claims court rules and local rules. (The second semester is LEG 202 - Advanced Trial Procedures.) Topics include filing requirements, the rules regarding service of process and calculation of deadlines. Projects include drafting summonses, complaints, answers and various motions.

**LEG 104 Torts****3 Credits**

Prerequisites: LEG 101 - Introduction to Paralegal Studies. A survey of the common law of negligence, strict liability (including products liability), intentional torts against persons and property, various defenses and insurance issues in tort law. Emphasis is on tort litigation practice, especially personal injury law. Projects include drafting tort complaints and discovery documents.

**LEG 105 Business Associations****3 Credits**

Prerequisites: LEG 101 - Introduction to Paralegal Studies. Introduces the student to the distinguishing characteristics of sole proprietorships, general and limited partnerships, limited liability companies and corporations. Topics include the formal requirements for establishing and doing business in each of these types of business organizations in Indiana, respective advantages and disadvantages of each type, relevant tax law issues, a brief introduction to the elements of a contract, common-law doctrines of employment law and agency law. Students will review many sample documents and will draft a general partnership agreement and a certificate of assumed business name.

**LEG 106 Torts and Claims Investigation****3 Credits**

Prerequisites: LEG 101 - Introduction to Paralegal Studies. Prepares the student to investigate tort claims. Instruction includes a brief survey of tort law and evidence law, proper interviewing techniques, information-gathering methods and resources and investigative file preparation. Special attention is given to the importance of knowing the elements of possible causes of action and the laws of evidence at the investigative stage of a case. Students will review sample complaints and forms. Projects include some legal research, preparing a demand letter, a complaint, an interview questionnaire, consent forms, letters requesting records and reports and a witness statement.

**LEG 107 Contracts and Commercial Law****3 Credits**

Prerequisites: LEG 101 - Introduction to Paralegal Studies. Examines the nature of contracts under both the common law and UCC Article 2 including contract formation, the Statute of Frauds, remedies, warranties and assignment law. The student will also be introduced to agency law, employment law, negotiable instruments law (UCC Article 3), secured transactions law (UCC Article 9) and the important differences among various types of business organizations. Students will examine and critique actual contracts and will have the opportunity to review Article 3 and Article 9 documents. Written projects include critiquing a contract, drafting a contract and drafting a complaint for breach of contract.

**LEG 108 Property Law****3 Credits**

Prerequisites: LEG 101 - Introduction to Paralegal Studies. A survey of the law of real and personal property in Indiana. Introduces the student to the different types of property, how ownership is acquired, estates in land, concurrent ownership, deeds, legal descriptions, easements, taxes and other encumbrances on title, title examination and insurance, the BFP, real estate sales and closings, mortgages and security interests, foreclosures, landlord-tenant law, gifts, trusts, bailments and lost property. Students will examine numerous documents and will learn to draft some, including a warranty deed, a mechanics lien and a complaint for foreclosure or eviction.

**LEG 202 Advanced Trial Procedures****3 Credits**

Prerequisites: LEG 101 - Introduction to Paralegal Studies, LEG 103 - Civil Procedures. The study of Indiana trial rules pertaining to actual trial. Topics include the discovery process and discovery tools, litigation support -- including organization and retrieval of trial documents -- techniques in preparing witnesses for trial and preparing jury instructions. The main project is compiling a trial notebook.

**LEG 203 Law Office Management and Technology****3 Credits**

Prerequisites: LEG 101 - Introduction to Paralegal Studies, LEG 102 - Legal Research and Writing, CIS 101 - Introduction to Microcomputers. Acquaints the student with various law office-specific software packages and services and their application in the law office. Through hands-on computer experience students work with spreadsheets, database management, timekeeping and filing, docket control, litigation support and legal research on the Internet and legal research computer services such as Westlaw and Lexis.

**LEG 204 Advanced Legal Writing****3 Credits**

Prerequisites: Should be taken in the last semester before graduation. Develops further the legal writing skills learned in Legal Research and Writing and in the procedural law and substantive law courses. Gives renewed emphasis to the importance of precision and accuracy in preparing correspondence, briefs and memos, litigation documents and transactional documents. To demonstrate mastery of these skills students prepare and compile into a portfolio examples of their best work in each category.

**LEG 209 Family Law****3 Credits**

Prerequisites: LEG 101 - Introduction to Paralegal Studies, LEG 108 - Property Law. An introduction to the statutory laws of marriage, dissolution, custody (including UCCJA), visitation, support (including URESA), adoption and guardianship of minors in Indiana. Students will review many pleadings and intake forms and will draft a divorce petition, a financial statement and a summary decree with child-support worksheet.

**LEG 210 Wills, Trusts, and Probate****3 Credits**

Prerequisites: LEG 101 - Introduction to Paralegal Studies, LEG 108 - Property Law. An introduction to the Indiana statutory law of wills, intestate succession, estate administration, death taxes (state and federal), trusts, power of attorney and guardianship. Students will be able to examine many actual probate documents and forms and will draft a will, a petition to open an estate and an inheritance tax return.

**LEG 211 Criminal Law****3 Credits**

Prerequisites: LEG 101 - Introduction to Paralegal Studies, LEG 103 - Civil Procedures. A theoretical and practical survey of the statutory law of crimes, evidence and criminal procedures in Indiana including an examination of sample pleadings and motions. Topics include the elements of specific crimes, formal procedures for pre-trial to post-trial, actual courtroom strategies and the practical concerns involved in both the prosecution and defense of criminal cases.

**LEG 212 Bankruptcy Law****3 Credits**

Prerequisites: LEG 101 - Introduction to Paralegal Studies, LEG 108 - Property Law. A survey of the Federal Bankruptcy Act, including the different kinds of bankruptcy proceedings. Emphasizes how to accumulate the debtor's financial information, compile initial schedules, prepare the list of creditors, collect and organize data for the first meeting of creditors, complete proofs of claim and pursue certain creditors' rights. The main written project is preparing the forms for a Chapter 13 bankruptcy case.

**LEG 280 Internship****1-6 Credits**

Prerequisites: LEG 101 - Introduction to Paralegal Studies, LEG 102 - Legal Research and Writing, LEG 103 - Civil Procedures, LEG 106 - Torts and Claims Investigation, CIS 101 - Introduction to Microcomputers. An opportunity for the intermediate paralegal student to acquire valuable field experience by working gratis 120 hours (at least eight hours per week) in a local law office under attorney supervision. The student keeps a journal and prepares a report of his or her experience at the end of the semester.

**LEG 281-294 Special Topics in Paralegal Studies****1-5 Credits**

Prerequisites: LEG 101 - Introduction to Paralegal Studies, LEG 102 - Legal Research and Writing, LEG 103 - Civil Procedures, LEG 106 - Torts and Claims Investigation, LEG 202 - Advanced Trial Procedures and at least two paralegal electives. Provides students with the opportunity to attend seminars, workshops and other instructional activities and/or do independent study on topics of interest that reinforce the concepts taught in or relevant to Paralegal Studies. Requires the supervision and approval of the Paralegal Program Chair.

**LND 101 Landscape Trees****3 Credits**

Prerequisites: None. Identifies shade, ornamental and evergreen trees and evaluates species' quality, growth habits and site adaptability. Covers 125 species important to landscaping, tree care and turf management.

**LND 102 Shrubs and Other Plants****3 Credits**

Prerequisites: None. Identifies 125 shrubs, vines, ground covers and herbaceous plants important to landscaping and turf management. Includes evaluation of growth habitats, species quality and site adaptability.

**LND 103 Landscape Management I****3 Credits**

Prerequisites: None. Introduces the practice of landscaping, tree care and turf management through lectures, slides, videos and field trips. Studies weed problems and their control. A large segment of the course is devoted to the study of non-pathogenic problems of landscape plants and turf, their pathogenic diseases and management of these problems.

**LND 104 Turf Management I****3 Credits**

Prerequisites: None. Studies the particular growth characteristics of the grass species used in lawn areas in the midwest and Great Lakes areas. Covers competitive influences and how to control these problems and promote good turf.

**LND 105 Botany****3 Credits**

Prerequisites: None. Studies the life of a plant and cell structure; the structure and function of roots, stems, leaves, flowers and seeds; the assimilation of water and nutrients in the plant's growth; the states of development; and the place and importance of soils.

**LND 106 Landscape Design I****3 Credits**

Prerequisites: LND 101 - Landscape Trees or LND 102 - Shrubs and Other Plants. Introduces landscape drafting techniques and basic landscape planning for residential and small business settings utilizing the proper selection of ornamental plants consistent with design and environmental requirements. Included are lectures, slide and film presentations and lab work with drafting tools and equipment.

**LND 201 Landscape Management II****3 Credits**

Prerequisites: LND 103 Landscape Management I. Takes advantage of growing season experiences to reinforce what is taught in the prerequisite course by textbook and lecture. On-site observations and hands-on experiences are provided. Includes practice in the monitoring of pest problems.

**LND 202 Landscape Design II****3 Credits**

Prerequisites: LND 106 Landscape Design I. Continues Landscape Design I in more sophisticated techniques such as enhancement of drawing by color use. Provides guidance and practice in making elevation drawings. Introduces the use of computer-aided drawings.

**LND 203 Insect Pests of Ornamentals****3 Credits**

Prerequisites: None. Stresses insect identification, structure and life history, and pest management of insects important to landscaping, tree care and turf management.

**LND 204 Herbaceous Ornamentals and Grasses****3 Credits**

Prerequisites: None. Stresses the identification of 125 annuals, perennials and grasses that are important to landscape management. Slides and videos introduce a list of non-woods plants that students may encounter in operating a landscape maintenance business. Bed principles for effective landscape displays will be covered. Cultural practices, propagation techniques, foliage and flower descriptions, watering, disease and insects are discussed.

**LND 205 Tree Care Practices****3 Credits**

Prerequisites: LND 101 - Landscape Trees. Conveys basic knowledge and techniques used by an arborist in the care of larger mature trees. Includes climbing, pruning, takedowns, removals, soil relationships and fertilization, tools and equipment and safety procedures.

**LND 206 Fundamentals of Horticulture****3 Credits**

Prerequisites: None. Focuses on the growth habits and culture of plants not particularly ornamental or frequently used in the landscape. Knowledge of these plants is useful to one employed in a garden center or a service organization where one is frequently expected to know answers to questions pertaining to gardening and horticulture.

**LND 207 Soils****3 Credits**

Prerequisites: LND 105 - Botany. Provides an overview of soil, its relationship to plant growth and its structural components in the environment. Includes discussion of the living components of the soil, its structural characteristics and water and chemical relationships to fertility. Covers erosion problems and their control. Includes outdoor and classroom laboratory experiences.

**LOG 101 Introduction to Materials Management****3 Credits**

Prerequisites: None. Studies factors influencing the flow of materials in a manufacturing enterprise. Covers basics of production planning and control, purchasing, forecasting, inventory and distribution issues. Concludes with an overview of just-in-time theory and practices.

**LOG 201 Transportation Systems****3 Credits**

Prerequisites: None. Provides in-depth knowledge of transportation systems and their inter-relationships with our economic, social, political and environmental systems.

**LOG 202 Physical Distribution****3 Credits**

Prerequisites: None. Focuses on the major concepts and rationale for utilizing warehouse inventories to lower costs of transportation, improve customer service, avoid stockouts, improve purchasing economics and seasonal variability.

**MEA 102 First Aid and CPR****2 Credits**

Prerequisites: None. Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies, and apply appropriate first aid including CPR.

**MEA 113 Pharmacology****3 Credits**

Prerequisites: ANP 101 - Anatomy and Physiology I. Discusses the most common medications in current use with emphasis on classifications, uses, routes of administration, dosages, interactions, incompatibilities and side effects. Emphasizes the 50 most commonly prescribed drugs listed in *Pharmacy Times*. Addresses special precautions, legal aspects, patient education, and preparation and administration of medications.

**MEA 114 Medical Assisting Laboratory Techniques****3 Credits**

Prerequisites: ANP 101 - Anatomy and Physiology I. Prepares student to perform various basic laboratory procedures including preparation of patients, collecting and preparing appropriate specimens and expected norms of laboratory test results. Includes current safety and quality control standards.

**MEA 115 Medical Insurance****2 Credits**

Prerequisites: None. Provides an overview of medical insurance programs and skills developed in handling insurance forms, CPT and ICD-9-CM Coding and reports as applied to the medical office.

**MEA 120 Medical Assisting Clinical Externship****3 Credits**

Prerequisites: Program advisor approval. Provides opportunities to observe, perform and discuss various clinical competencies under supervision, with learning experiences obtained in selected physician's offices, clinics or hospitals. Reviews the following basic principles of psychology as they apply to the medical assistant: developmental stages of the life cycle; hereditary, cultural and environmental influences on behavior; mental health; and applied psychology.

**MEA 121 Medical Assisting Administrative Externship****3 Credits**

Prerequisites: Program advisor approval. Provides opportunities to observe, perform and discuss various administrative competencies under supervision, with learning experiences obtained in selected physicians' offices, clinics or hospitals.

**MEA 130 Medical Office Administration****2 Credits**

Prerequisites: None. Provides an understanding of the administrative duties and responsibilities pertinent to medical offices. Develops communications skills specifically directed toward a medical office and the role of the professional medical assistant as a member of the health care team. Includes instruction in medical correspondence and records, case histories of patients, filing, telephone procedures, appointment scheduling, receptionist duties and processing mail. Includes development of desirable personality traits, interpersonal relationships and attitudes within the medical office.

**MEA 131 Medical Financial Management with Computer Applications****3 Credits**

Prerequisites: None. Provides instruction in medical office financial administration, bookkeeping and materials management.

**MEA 132 Computer Concepts in the Medical Office****2 Credits**

Prerequisites: Keyboard 25 WPM. Familiarizes students with computer applications in the health care setting. Provides students with basics of operations and applications of computer usages within the health care provider office. Includes simulated data entry for patient records, procedures and diagnostic codes, insurance processing, and electronic transmission of claims and scheduling day-sheet transactions in accordance with the AAMA DACUM guidelines.

**MEA 133 Clinical Theory****3 Credits**

Prerequisites: None. Presents theory related to clinical aspects of the medical office. Includes theory related to vital signs, asepsis, sterilization, medication administration, EKGs, X-ray, nutrition, physical therapy and other skills needed to assist the physician in the clinical setting.

**MEA 134 Clinical Skills Lab****2 Credits**

Prerequisites: None. Allows students to become familiar with clinical duties and gain the skills needed to perform them. Includes vital signs, asepsis, sterilization, medications, EKGs, X-ray, nutrition, physical therapy and other technical skills needed to assist the physician.

**MEA 135 Medical Word Processing/Transcription****3 Credits**

Prerequisites: Keyboard 25 WPM. Develops skills and knowledge of medical dictation, machine transcription and use of word processors and typewriters. Includes typing and transcription of medical reports, terminology and correspondence.

**MEA 136 Office Administration with Computer Applications****3 Credits**

Prerequisites: Demonstration of computer keyboard skills through test out on speed, accuracy and formatting or OAD 019 - Keyboarding. Provides a basic understanding of the administrative duties and responsibilities pertinent to medical offices. Includes instruction in medical correspondence and records, case histories of patients, filing, telephone procedures, appointment scheduling, receptionist duties and processing mail. Familiarizes the student with computer applications in the health care setting. Provides the student with basics of operations and application of computer usage within the health care provider office. Includes simulated data entry for patient records, appointment scheduling and daysheet transactions.

**MEA 137 Medical Insurance and Basic Coding with Computer Applications****3 Credits**

Prerequisites: HHS 101 - Medical Terminology and demonstration of computer keyboard skills through test out on speed, accuracy and formatting or OAD 019 - Keyboarding. Provides an overview of medical insurance programs and the skills needed in handling insurance forms, CPT and ICD-9-CM Coding and insurance reports as applied to the medical office. Includes simulated computer data entry for patient records, procedure and diagnostic codes, insurance processing and electronic transmission of claims.

**MEA 138 Clinical I****3 Credits**

Prerequisites or Corequisites: HHS 101 - Medical Terminology, currently CPR trained (Health Care Provider) or HHS 104 - CPR and Basic Health Awareness and MEA advisor approval. Presents theory and lab related to clinical aspects of the medical office. Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies and apply appropriate first aid. Allows students to become familiar with clinical duties and to gain the skills needed to perform them. Includes vital signs, asepsis, sterilization, nutrition and treatment room procedures.

**MEA 139 Clinical II****3 Credits**

Prerequisites or Corequisites: MEA 138 - Clinical I and MEA advisor approval. Presents a continuation of clinical skills and theory and allows the student to become familiar with the following clinical duties: medications, EKGs, X-ray, physical therapy, respiratory testing and other technical skills needed to assist the physician.

**MEA 140 Basic Home Health Aide Training****3 Credits**

Prerequisites: None. Presents knowledge considered necessary for providing a general range of home health aide services. Addresses care for a variety of patient populations and focuses on theory behind home health skills.

**MEA 141 Advanced Home Health Aide Training****2 Credits**

Prerequisites: MEA 140 - Basic Home Health Aide Training. Presents advanced topics related to care for homebound clients. Criteria for safely and accurately performing a variety of home health aide skills will be explored. Skills required to function as a home health aide will be taught and evaluated through competency check-offs. Experience at a home health agency employing home health aides is included.

**MEA 142 Body Systems and Disease****3 Credits**

Prerequisites: None. Presents basic concepts of anatomy and physiology along with the study of disease. Includes signs and symptoms of diseases and their impact on the function of various body systems. Explores maintaining optimal health in the presence of a disease. Includes discussion of patient's role in the management of the disease process.

**MEA 143 Home Health Care Terminology****2 Credits**

Prerequisites: None. Explores a system of analysis for basic medical terms. Includes practice in correct spelling of medical terms along with exploration of various medical abbreviations. Emphasizes medical terms and abbreviations specific to the home health care forum.

**MEA 151 Pharmacy Technician I****3 Credits**

Prerequisites: None. Introduces basic skills and information needed to qualify as a Pharmacy Technician in the state of Indiana.

**MEA 152 Pharmacy Technician II****3 Credits**

Prerequisites: MAT 050 - Basic Algebra or demonstrated competency through appropriate assessment and MEA 151 - Pharmacy Technician I. Theory is applied through performance of competency levels of the technical pharmacy task including: properly preparing, documenting and processing prescriptions according to pharmacy policy and regulations; preparing intravenous and special solutions; properly preparing and maintaining records appropriate to the pharmacy, including quality control records, controlled substances (narcotic drug distribution), prescription data and records; applying basic principles of microbiology, using aseptic techniques; and operating and maintaining the laminar hood. The student will employ proper communication skills (both written and verbal). Identification and adherence to check points will be emphasized. Current national and Indiana law and administrative rules as they relate to the practice of the pharmacy technician will be presented. The importance of adherence to universal precautions will be discussed.

**MEA 153 Administrative Aspects of Pharmacy Technology****2 Credits**

Prerequisites: None. Addresses the administrative aspect of pharmacy technology including professional development, professional communication, time management, record keeping, computer applications, third party payment processing, operation of business machines and utilization of reference material.

**MEA 154 Pharmacy Externship****2 Credits**

Prerequisites: MEA 151 - Pharmacy Technician I. Provides the opportunity to discuss and perform clinical procedures under supervision, with learning experiences obtained in selected retail pharmacies and/or hospitals.

**MEA 160 - Massage Technician Training I****3 Credits**

Prerequisites: None. Provides information about the anatomy and physiology of skeletal, cardiovascular, lymphatic, respiratory and muscular systems. Includes information of different styles, techniques and viewpoints of massage. Demonstrates in detail the physiological effects of circulatory massage strokes. Includes the proper care and use of equipment and supplies. Adequate supervision during lab practices is provided.

**MEA 161 Massage Technician Training II****3 Credits**

Prerequisites: MEA 160 - Massage Technician Training I. Continues with instruction offered in Massage Technician Training I. Addresses additional techniques and modalities including deep friction, joint mobilization, percussion, compression (pumping), vibration, jostling, shaking and rocking. Introduces corporate (chair) massage. Introduces energy systems. Discusses guidelines for setting up a practice including compliance with local and state regulations.

**MEA 162 Legal and Ethical Aspects of Massage Therapy****1 Credit**

Prerequisites: None. Addresses the ethics of massage therapy along with legal requirements and implications for massage technicians and therapists. Includes relationships with other health care practitioners and involvement and responsibilities in community projects.

**MEA 163 Holistic Approach to Massage Therapy****3 Credits**

Prerequisites: None. Considers the holistic approach to wellness with discussion including the connection of disease, the autonomic nervous system and the emotions. Explores the importance of the mind-body connection. Includes hygiene for both the client and therapist.

**MEA 164 Human Energies****3 Credits**

Prerequisites: None. Discusses communication skills, including verbal and nonverbal, body language and intuition. Helps the student develop an understanding of body circuits and energy transference.

**MEA 165 Acupressure Theory and Methods****3 Credits**

Prerequisites: None. Introduces the student to information and treatments designed around the approach of Asian medicine, including energy systems, meridians and the five elements theory. Includes the basics of Shiatsu.

**MEA 167 Deep Tissue/Muscle Release****3 Credits**

Prerequisites: None. Helps practitioners apply deeper techniques in body therapy, releasing chronically held tissue from past trauma, illness or recent injury. Discusses the use of various treatment modalities. Deep-tissue techniques include releasing the muscles and tissues of the upper body, including the sternocleidomastoid muscles and the pectorals. Other techniques included are defining the clavicle and releasing the attachment to the scapula, "lengthening the back," defining the iliac crest and sacrum and releasing the gluteals.

**MEA 168 Hydro/Thermodynamics****1 Credit**

Prerequisites: None. Introduces the uses of water, heat and cold therapies, liniments, ointments and oils to promote healing.

**MEA 169 Administrative Training****2 Credits**

Prerequisites: None. Provides a basic understanding of the administrative responsibilities pertinent to massage therapy. Addresses computer usage, marketing and office skills that will allow students to create, promote and maintain their own businesses.

**MEA 203 Disease Conditions****3 Credits**

Prerequisites: None. Presents the basic concepts of diseases, their course, and functional disturbances as they relate to body systems. Includes the precipitating risk factors and appropriate methods of patient education regarding various disease processes.

**MEA 209 Electrocardiograph - Basic Technique****1 Credit**

Corequisites: MEA 210 - Introduction to EKG Interpretation. Presents the basic reasons for prescribing an electrocardiograph and the theory involved. The physiological principles involved are the basis for proper techniques that will be practiced by the students until they demonstrate competency with both the theory and required skills in doing a prescribed electrocardiograph.

**MEA 210 Introduction to EKG Interpretation****2 Credits**

Prerequisites: None. Includes anatomy and physiology of the cardiovascular system and recognition of basic arrhythmias. Measurement of the EKG complex will be taught with the emphasis placed upon determining heart rates and rhythms.

**MEA 211 Advanced Electrocardiograph Interpretation****3 Credits**

Prerequisites: MEA 210 - Introduction to EKG Interpretation. Includes anatomy and physiology of the cardiovascular system, interpretation of rhythm strips and 12 lead EKGs and the cardiovascular drugs associated with arrhythmias.

**MEA 212 Phlebotomy****3 Credits**

Prerequisites: MEA 114 - Medical Assisting Laboratory Techniques or program advisor approval. Presents the principles and practices of laboratory specimen collection and processing. Also covers medical terminology, infection control, patient identification, anatomy and physiology, anticoagulants, blood collection, specimen processing and interpersonal skills.

**MEA 213 Advanced Insurance Coding****3 Credits**

Prerequisites: MEA 115 - Medical Insurance or program advisor approval. Introduces the medical office administrator to codes necessary to bill insurance claims and provides experience in coding claim forms using the correct combination of codes to maximize reimbursement.

**MEA 214 Advanced First Aid and CPR****3 Credits**

Prerequisites: None. Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies and apply appropriate first aid. Handling of victims of hazardous materials accidents will be addressed. Covers CPR including one and two rescuer. Teaches adult, infant, and child resuscitation.

**MEA 215 Advanced Medical Terminology****3 Credits**

Prerequisites: HHS 101 - Medical Terminology. Includes more detailed and advanced study of the derivatives of medical terms, symbols, and signs. Presents an in-depth study of the correlation between medical vocabulary and the application of those terms to the anatomy and physiology of the body, related diseases, conditions and treatment.

**MEA 216 Nutrition****2 Credits**

Prerequisites: None. Presents the importance of a balanced diet, methods of evaluating a diet; the basic four food groups; the functions, requirements and food sources of fats, proteins, carbohydrates, vitamins, and minerals and the deficiency diseases. Introduces meal planning, nutrition for various age groups, religious and nationality food habits and diet therapy. Explains special diets for diabetes, diseases of the GI tract, urinary tract, blood, cardiovascular system, obesity, cancer, allergy and pregnancy.

**MEA 217 Gerontology****3 Credits**

Prerequisites: None. Presents a multidisciplinary study of the sociological, psychological and physiological aspects of aging. Included will be patient education and the impact that all facets of aging have on the total person.

**MEA 221 Seminar I****1 Credit**

Prerequisites: None. Discusses topics of current interest in the medical assisting profession. Attention is given to special interest projects for students in the medical assistant program. Field trips, guest speakers, audio-visual activities and seminars may be utilized.

**MEA 222 Seminar II****2 Credits**

Prerequisites: None. Discusses topics of current interest in the medical assisting profession. Attention is given to special interest projects for students in the medical assistant program. Field trips, guest speakers, audio-visual activities and seminars may be utilized.

**MEA 223 Seminar III****3 Credits**

Prerequisites: None. Discusses topics of current interest in the medical assisting profession. Attention is given to special interest projects for students in the medical assistant program. Field trips, guest speakers, audio-visual activities and seminars may be utilized.

**MEA 224 Hospital Coding****3 Credits**

Prerequisites: MEA 213 - Advanced Insurance Coding or advisor approval. Builds on the comprehensive coding skills acquired through prerequisite course MEA 213. Introduces additional instruction in diagnostic related groups (DRGs) and medical record extraction. Provides discussion, observation and performance opportunities in related insurance coding competencies. Both classroom and clinical sites are used to provide realistic experiences under supervision. External sites include physicians' offices, clinics and hospitals.

**MEA 225 Insurance Coding Externship****3 Credits**

Prerequisites: Advisor approval. Provides opportunities to observe, perform, and discuss various insurance related competencies under supervision, with learning experience obtained in selected physicians' offices, clinics, or hospitals.

**MEA 226 Medical Assisting - Advanced Clinical Procedures****3 Credits**

Prerequisites: MEA 133 - Clinical Theory and MEA 134 - Clinical Skills Lab. Advances the knowledge and skills enabling the student to assist in clinical management in the medical and surgical specialties. Addresses health services in the community which are directed toward prevention of disease and maintenance and restoration of health.

**MEA 227 Advanced Administrative Procedures****3 Credits**

Prerequisites: MEA 130 - Medical Office Administration. Provides an in-depth study of various influences on office functions concerning organization and management of a physician's office. Includes government and professional sources for consultation.

**MEA 228 Ophthalmic Dispensing****3 Credits**

Prerequisites: None. Includes the study of frame types and parts, facial measurements for fitting, functional and cosmetic aspects of frame selection, and frame alignment, adjusting and repair. Contact lenses, types, care, insertion and removal methods, modifications, polishing, and patient evaluation and education also are covered.

**MEA 229 Nurse Aide Procedures and Practicum****3 Credits**

Prerequisites: None. Prepares beginning level nurse aides with the knowledge, skills and attitudes essential for providing basic nursing care. Students who pass this course will receive a Nurse Aide Certificate. (Note: Contact hours are specified by the Indiana State Board of Health.)

**MEA 230 Structure and Function of the Eye****2 Credits**

Prerequisites: None. Familiarizes the student with the structure and function of the human eye. Pathological conditions will also be covered.

**MEA 231 Basic Optics****3 Credits**

Prerequisites: None. Acquaints the student with basic optical principles. Fundamental properties of lenses and mirrors and how they relate to the correction of visual problems will be discussed. Types of optical defects commonly associated with vision will be covered. The student will be introduced to optometric instrumentation, fundamental soft lens formulas and visual field screening.

**MEA 232 Clinical Optometric/Ophthalmic Practicum****2 Credits**

Prerequisites: None. This "hands on" field experience allows the student to put into practice, under supervision, skills and knowledge obtained in class and labs.

**MEA 233 Health Unit Coordinator****5 Credits**

Prerequisites: None. Prepares students to provide reception and clerical support to the nursing unit to facilitate the delivery of nursing care. Students will gain skills in communication methods, problem solving, transcription processes, classification of orders and appropriate documentation procedures.

**MEA 234 Phlebotomy Externship****3 Credits**

Prerequisites: MEA 212 - Phlebotomy. Provides the opportunity to discuss and perform phlebotomy procedures under supervision with learning experiences obtained in selected laboratories, physicians' offices, clinics or hospitals.

**MEA 235 Advanced Transcription****3 Credits**

Prerequisites: MEA 135 - Medical Wordprocessing/Transcription. Improves accuracy and speed of the medical transcriptionist utilizing various formats for medical transcription.

**MEA 260 Advanced Acupressure****3 Credits**

Prerequisites: MEA 165 - Acupressure Theory and Methods. Focuses on the advanced theory and practice of acupressure and Asian medicine.

**MEA 261 Reflexology****3 Credits**

Prerequisites: None. Teaches the different aspects and points on the foot and hand relating to other parts of the body. Can be integrated into massage practice or can be an independent approach. Includes an introduction to the musculo-skeletal, cardiovascular and nervous systems and their relationship to the zones on the feet. Systems disorders including the sensory and the endocrine are also identified and discussed. Identifies the relationship of the five zones of the foot and the areas of the spine with spinal nerve innervation and intervention.

**MEA 262 Sports Therapy****3 Credits**

Prerequisites: None. Presents an advanced course in sports massage designed to train the therapist techniques for therapy on athletes. Includes post-pre-event techniques with increased stretching and deep muscle release.

**MEA 263 Infant Massage****3 Credits**

Prerequisites: None. Teaches the therapist massage techniques for infants.

**MEA 264 Aroma Therapy****3 Credits**

Prerequisites: None. Teaches the therapist the integration of essential oils and aroma therapy into massage techniques.

**MEA 265 Advanced Techniques and Hygiene****3 Credits**

Prerequisites: MEA 160 - Massage Technician Training I, MEA 161 - Massage Technician Training II. Provides the student with advanced training focusing on techniques, body mechanics and client management. Addresses hygiene factors for both the therapist and the client. Includes thorough client assessment techniques and is designed to expand the therapist into the medical field. Discusses the relationship of various illnesses and conditions to massage.

**MEA 281-294 Special Topics in Medical Assistant****1-5 Credits**

Prerequisites: Advisor approval. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**MEA 299 CMA Comprehensive Review****3 Credits**

Prerequisites: None. Corequisites: Advisor approval. Reviews the entire medical assisting program in preparation for the CMA registry examination. Administration, clinical and general information are covered. Testing procedures are addressed. Emphasis is placed on job readiness and placement. The course earns continuing education units for graduate CMAs to fulfill their certification renewal requirements.

**MFG 260 Advanced Problem Solving Techniques****3 Credits**

Prerequisites: Minimum 45 credits of general education and Manufacturing coursework completed or advisor approval. This course is generally part of the capstone experience for students who are ready to graduate from the Manufacturing Technology program. The course should draw from a broad spectrum of the student's prior course work and integrate concepts of manufacturing into a project-oriented class. Concepts found in the SCANS 2000 report are integral to the course. Teamwork, communication skills, problem solving, fundamental concepts of complexity theory relating to systems operations, etc. are relevant topics.

**MFG 280 Co-op/Internship****3 Credits**

Prerequisites: Students must have completed a minimum of 30 credits toward their degrees with at least a 3.0 cumulative grade point average. Gives students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

**MKT 101 Principles of Marketing****3 Credits**

Prerequisites: None. Introduces the marketing role in society and how it affects the marketing strategy. Emphasizes the marketing mix, product planning, and the effects of the demographic dimension on the consumer market.

**MKT 102 Principles of Selling****3 Credits**

Prerequisites: None. Provides an overview of the selling process. Includes the psychology of selling and develops skills through a series of selling situations.

**MKT 104 Promotion Management****3 Credits**

Prerequisites: None. Presents management planning and oversight techniques for effectively communicating the results of the marketing strategy to customers. Provides a comprehensive overview of promotion methods as they interact in the marketing mix, which includes price, channel of distribution and product. Everything the company does has potential for promotional impact for the customers, which therefore requires effective management to pursue its marketing objectives in the target market.

**MKT 110 Consumer Behavior****3 Credits**

Prerequisites or Corequisites: MKT 101 - Principles of Marketing. Study of the basic principles of consumer behavior which offers insight into the buyer-seller relationship. Application of theories from psychology, social psychology, and economics are examined. Course examines concepts that have implications for marketing management decisions.

**MKT 201 Introduction to Market Research****3 Credits**

Prerequisites: MKT 101 - Principles of Marketing and MAT 112 - Functional Mathematics or MAT 111 - Intermediate Algebra. Presents basic research methods entailing procedures, questionnaire design, data analysis, and effectively communicating research results.

**MKT 202 Logistics/Purchasing Control****3 Credits**

Prerequisites: MKT 101 - Principles of Marketing or BUS 101 - Introduction to Business. Introduces students to the framework of logistics, the logistics environment, customer services and materials management. Introduces material resources planning (MRP) and just-in-time (JIT) principles.

**MKT 204 Marketing Management****3 Credits**

Prerequisites: Departmental approval. Focuses on the analysis, implementation and control of marketing strategy. Emphasizes the major decisions management faces in its effort to harmonize the objectives and resources of the organization with the needs and opportunities of the marketplace.

**MKT 205 Principles of Insurance****3 Credits**

Prerequisites: None. Introduces the risks faced by business firms including property, liability and personal losses, and how they are handled. Presents insurance contracts and their uses. Includes an overview of life insurance, health and pension insurance, public policy, government regulations, and social insurance.

**MKT 207 Public Relations****3 Credits**

Prerequisites: None. Provides broad coverage of the public relations field and acquaints students with the role of effective internal and external public relations in business and industry. Examines the goals and benefits of public relations, the tools of the public relations practitioner, and the principles and trends of the field.

**MKT 219 Field Study/Cooperative Education****4 Credits**

Prerequisites: None. Provides students the opportunity to work at a job site that is specifically related to their career objectives. Provides field experience within the framework of actual work experience in marketing.

**MKT 220 Principles of Retailing****3 Credits**

Prerequisites: MKT 101 - Principles of Marketing and MAT 112 - Functional Mathematics or MAT 111 - Intermediate Algebra. Studies retailing concepts and practices including retail merchandise planning, buying, pricing, promotion and control in established retail operations. Attention is given to managerial and operational skills.

**MKT 240 Internet Marketing****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers, MKT 101 - Principles of Marketing. Provides an introduction to the Internet as a marketing strategy including product, pricing, communication and distribution considerations. Profiles Internet users and market segments and reviews the Internet as a primary and secondary marketing research tool as well as a relationship marketing tool. Incorporates marketing implementation and planning strategies. Discusses legal and ethical issues in Internet marketing.

**MLT 102 Routine Analysis Techniques****3 Credits**

Prerequisites: Advisor approval. Studies principles, practices and clinical laboratory techniques associated with routine analysis of urine and other body fluids.

**MLT 103 Fundamentals of Laboratory Techniques****1 Credit**

Prerequisites: Advisor approval. Introduces elementary skills required in the medical laboratory. Covers laboratory math, quality control, pipetting skills, venipuncture techniques and microscope skills.

**MLT 196 Introduction to Patient Care and Phlebotomy****3 Credits**

Prerequisites: None. Introduces the health care delivery system. Provides instruction in specimen collection techniques, infection control and safety, and teaches applications of communications concepts and stress management.

**MLT 197 Clinical Phlebotomy Experience****3 Credits**

Prerequisites: None. Covers the practice and demonstration of clinical applications of phlebotomy in the clinical setting.

**MLT 198 Clinical Phlebotomy Discussion****1 Credit**

Prerequisites: None. Develops the professional socialization process necessary to function in a health care setting and reviews routine and special phlebotomy procedures in light of phlebotomist-patient interaction.

**MLT 201 Immunology Techniques****3 Credits**

Prerequisites: Student is in good standing and currently enrolled in the MLT program. Provides students with an understanding of principles of the human immunologic system and experience in routine testing.

**MLT 202 Immunohematology Techniques****3 Credits**

Prerequisites: MLT 201 - Immunology Techniques. Instructs students in practice and procedures used in blood banking in the clinical laboratory.

**MLT 203 Instrumentation****2 Credits**

Prerequisites: Student is in good standing and currently enrolled in MLT program. Includes instrumentation theory and practice as applied to electronic equipment and automated systems in the medical laboratory.

**MLT 205 Hematology Techniques I****3 Credits**

Prerequisites: Student is in good standing and currently enrolled in MLT program and MLT 101 - Fundamentals of Laboratory Techniques. Presents theory of blood formation and function and routine hematologic procedures with emphasis on differentiation of normal from commonly encountered abnormal blood cells. Includes basic theory of hemostasis and associated routine coagulation procedures. Presents clinicopathologic correlations.

**MLT 206 Hematology Techniques II****3 Credits**

Prerequisites: Student is in good standing and currently enrolled in MLT program and MLT 205 - Hematology Techniques I. Continues the study of principles and procedures in hematology and hemostasis. Introduces procedures beyond those routinely performed. Continues cell differentiation with emphasis on early and less commonly encountered abnormal cells and associated special stains. Includes clinicopathologic correlations.

**MLT 207 Chemistry Techniques I****3 Credits**

Prerequisites: None. Corequisite: MLT 101 - Fundamentals of Laboratory Techniques. Presents principles, procedures and clinicopathologic correlations in routine chemical analysis of the blood and other body fluids. Provides laboratory experiences in basic methods selected to develop routine analytical abilities and to promote the ability to recognize sources of error.

**MLT 209 Routine Analysis Applications****1 Credit**

Prerequisites: MLT 102 - Routine Analysis Techniques. Studies clinical applications of routine urine analysis in the hospital laboratory including physical, chemical and microscopic examination of urine.

**MLT 210 Hematology Applications****3 Credits**

Prerequisites: MLT 206 - Hematology Techniques II. Studies and practices the principles and techniques of hematology in the hospital laboratory.

**MLT 212 Immunology Applications****1 Credit**

Prerequisites: MLT 201 - Immunology Techniques. Studies and practices the clinical application of serology in the hospital laboratory.

**MLT 213 Immunohematology Applications****3 Credits**

Prerequisites: MLT 202 - Immunohematology Techniques. Studies and practices the principles and procedures used in blood banking in the hospital laboratory.

**MLT 215 Parasitology and Mycology****1 Credit**

Prerequisites: Student must be in good standing and currently enrolled in MLT program and MLT 222 - Microbiology Techniques. Provides study in the isolation, identification, life cycles and disease processes of pathogenic fungi and parasites.

**MLT 218 Clinical Pathology****3 Credits**

Prerequisites: Student must be enrolled in the MLT program and have a GPA of C or above. Examines various disease conditions, diagnosis, etiologies, clinical symptoms and related laboratory findings.

**MLT 221 Microbiology Applications****3 Credits**

Prerequisites: MLT 222 - Microbiology Techniques. Studies applications and clinical practices of microbiology found in the hospital laboratory.

**MLT 222 Microbiology Techniques****3 Credits**

Prerequisites: Student is in good standing and currently enrolled in MLT program and BIO 211 - General Microbiology or equivalent recommended. Instructs students in principles of bacteriology including gram negative and positive bacilli and cocci, fastidious organisms and an overview of anaerobic and acid-fast bacteria. Includes instruction in the basic laboratory techniques in clinical bacteriology.

**MLT 224 Chemistry Applications****3 Credits**

Prerequisites: MLT 207 - Chemistry Techniques I. Corequisites: MLT 227 - Chemistry Techniques II. Studies and practices the analytical aspects of clinical chemistry in the hospital laboratory.

**MLT 227 Chemistry Techniques II****2 Credits**

Prerequisites: MLT 207 - Chemistry Techniques I. Continues the study of principles, procedures and clinicopathologic correlations in the chemical analysis of blood and other body fluids. Introduces procedures beyond those routinely performed in the clinical chemistry laboratory including clinicopathologic correlations.

**MLT 280 Co-op/Internship****1-6 Credits**

Prerequisites: None. Provides students with the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

**MTT 101 Introduction to Machining****3 Credits**

Prerequisites: None. Instructs students in shop safety, industrial terminology, tools and machine tooling, measurement and layout. Includes laboratory exercises to begin project completion of turning, milling and grinding applications.

**MTT 102 Turning Processes 1****3 Credits**

Prerequisites: None. Instructs students in shop safety and industrial terminology and provides laboratory experience toward project completion on the conventional lathe.

**MTT 103 Milling Processes I****3 Credits**

Prerequisites: None. Instructs students in shop safety and industrial terminology and provides laboratory experience towards project completion on the vertical and/or horizontal milling machine.

**MTT 104 Machinery Handbook****3 Credits**

Prerequisites: Equivalent of MTT 101 - Introduction to Machining and its prerequisites as determined by advisor. Explores the intent and use of the machinery handbook. Applies principles and concepts in the machinery handbook to projects in the industry.

**MTT 106 Advanced Print Interpretation****3 Credits**

Prerequisites: MTT 101 - Introduction to Machining or advisor approval. Applies mathematics in solving engineering and design-related problems in the areas of die design, fabrication, assembly, special machinery, die casting and molds. Emphasizes GDT tolerancing.

**MTT 110 Turning and Milling Processes****3 Credits**

Prerequisites: TEC 101 - Manufacturing Processes, recommend MTT 101 - Introduction to Machining. Provides shop safety, industrial terminology and laboratory experiences on conventional lathe and milling machines.

**MTT 202 Advanced Turning Processes II****3 Credits**

Prerequisites: MTT 102 - Turning Processes I or MTT 110 - Turning and Milling Processes and its prerequisites as determined by advisor. Instructs students in shop safety and industrial terminology.

**MTT 203 Milling Processes II****3 Credits**

Prerequisites: MTT 103 - Milling Processes I or MTT 110 - Turning and Milling Processes. Covers shop safety, industrial terminology and provides advanced laboratory experience towards project completion on the vertical and/or horizontal milling machine.

**MTT 204 Abrasive Processes I****3 Credits**

Prerequisites: TEC 101 - Manufacturing Processes. Provides shop safety, industrial terminology and laboratory experiences on abrasive processing machines. Includes superabrasives technology processes.

**MTT 205 Abrasive Processes II****3 Credits**

Prerequisites: MTT 204 - Abrasive Processes I. Emphasizes shop safety, industrial terminology and provides advanced laboratory experience towards project completion on a variety of abrasive processing machines.

**MTT 206 Tooling Design I****3 Credits**

Prerequisites: MTT 110 - Turning and Milling Processes. Introduces concepts of tooling design, assembly and standards of fabrication. Emphasizes jig and fixture design/components, application and operational characteristics.

**MTT 207 Tooling Design II****3 Credits**

Prerequisites: MTT 206 - Tooling Design I. Covers concepts of tooling design, assembly and standards of fabrication. Emphasizes blanking, piercing and progressive type dies, design/components including application and operational characteristics.

**MTT 208 CNC Programming I****3 Credits**

Prerequisites: MAT 121 - Geometry-Trigonometry or MAT 131 - Algebra/Trigonometry 1 or advisor approval. Introduces two and three axis CNC machining. Develops the theory of programming in the classroom with application of the program accomplished on industry-type machines. Studies terminology of coordinates, cutter paths, angle cutting, and linear and circular interpolation.

**MTT 209 CNC Programming II****3 Credits**

Prerequisites: MTT 208 - CNC Programming I or advisor approval. Expands on MTT 208, providing further study in computer-aided numerical control programming. Focuses on canned cycles, loops, macros, thread cycles, drilling and pocket milling cycles.

**MTT 210 Interactive CNC****3 Credits**

Prerequisites: MTT 106 - Advanced Print Interpretation, MTT 208 - CNC Programming I, MAT 121 - Geometry-Trigonometry, and computer competencies as determined by advisor. Continues MTT 209 - CNC Programming II. Introduces advanced applications of computer-assisted part programming and simulation, language codes set-up and operation, troubleshooting and problem solving in a CNC turning center and CNC machining center. Includes related mathematical skills.

**MTT 211 Advanced Programming Techniques****3 Credits**

Prerequisites: MTT 210 - Interactive CNC. Includes the application of advanced CNC programming techniques to industrial machining. Uses downloading and uploading techniques through advanced projects.

**MTT 220 CAD/CAM I****3 Credits**

Prerequisites: MTT 208 - CNC Programming I, DCT 113 - Intermediate CAD, DSN 220 - Advanced CAD, or equivalent as determined by advisor. Covers the development of various machine routines. Introduces computer-assisted machining as it relates to automated milling and machining centers. Emphasizes proper programming techniques, control familiarity, file data and machining functions.

**MTT 221 CAD/CAM II****3 Credits**

Prerequisites: MTT 220 - CAD/CAM I or equivalent as determined by advisor. Covers the development of 3-D shapes and the codes necessary to produce parts. Requires students to design a new product or modify an existing design. Includes creating surface curves. Focuses on creating toolpaths for complex 3D surfaces.

**MTT 225 Introduction to Mold Making****3 Credits**

Prerequisites: None. Introduces the apprentice mold maker to the basic fundamentals of mold construction. Discusses the fundamental processes and basic construction of plastic molds, molds for die casting and rubber molds.

**MTT 240 Machining Operations I****4 Credits**

Prerequisites: MTT 101 - Introduction to Machining, TEC 101 - Manufacturing Processes. Continues MTT 101 - Introduction to Machining. Students will gain additional lab experience on the drill press, lathe, milling machine, surface grinder, o.d. grinder, tool post grinder and jig grinder. Measurement, layout and inspection are performed at the advanced level. Classroom activities concentrate on cutting tool terminology, screw thread terminology, taper calculations and the Machinery Handbook. Heat treating is also covered.

**MTT 241 Machining Operations II****4 Credits**

Prerequisites: MTT 101 - Introduction to Machining and MTT 102 - Turning Processes I. Emphasizes basic tool construction and close tolerance machining. Using the various types of equipment found in the laboratory, students rough machine, heat treat and precision grind detailed parts to tolerance of within .0005" consistently. Classroom activities concentrate on precision setup, inspection work and basic tool construction. Experience is also gained in basic conversational CNC programming.

**MTT 242 CNC Machining****4 Credits**

Prerequisites: MTT 208 - CNC Programming I, MTT 241 - Machining Operations II, DSN 103 - CAD Fundamentals, DCT 227 - Geometric Dimensioning and Tolerancing. Introduces and instructs the student in all aspects of Computer Numeric Control (CNC) machining. The student will program, set up and operate CNC mills and lathes utilizing CAD/CAM for fixture and part design and verification. Students continually improve programming, set up and cycle time efficiency. Students inspect and document the quality of production parts and compare their performance with an industry benchmark for each project.

**MTT 243 Tool & Die Making I****3 Credits**

Prerequisites: MTT 101 - Introduction to Machining, MTT 102 - Turning Processes I, MTT 103 - Milling Processes I, MTT 208 - CNC Programming I. Focuses on construction of a two-state progressive die that incorporates interchangeable details. Each student manufactures a die that incorporates the parting principle and performs the following operations: forming, piercing and parting. In addition, lecture material covers computations on blank lengths and diameters, blanking and piercing operations, drawing, progression and timing. Experience is gained in CNC machining and progressive die troubleshooting.

**MTT 244 Tool & Die Making II****4 Credits**

Prerequisites: MTT 101 - Introduction to Machining, MTT 102 - Turning Processes I, MTT 103 - Milling Processes I, MTT 208 - CNC Programming I, MTT 211 - Advanced Programming Techniques. Requires extensive detail work in machining as well as die making. Each student constructs die details that perform trimming, notching, piercing, piloting, forming and parting. Machining operations of die sections involves grinding of complicated contours as well as the use of the wire e.d.m. Additional experience is gained in programming/operation of CNC milling equipment.

**NUR 150 Nursing and Universal Needs****4 Credits**

Prerequisites: Admission to program. Corequisites: NUR 151 - Nursing and Universal Needs Practicum. Provides fundamental facts, concepts, principles and rationales necessary to meet universal healthcare needs. Introduces the five components of the nursing process and the roles of the associate degree nurse.

**NUR 151 Nursing and Universal Needs Practicum****4 Credits**

Prerequisites: Admission to program. Corequisites: NUR 150 - Nursing and Universal Needs. Simulated and actual patient care situations provide an opportunity to develop interpersonal and psychomotor skills. Initiates a beginning level of assessing, analyzing, planning, implementing and evaluating therapeutic measures in meeting basic universal healthcare needs. Provides an opportunity in the laboratory and clinical setting to explore the role of the associate degree nurse.

**NUR 152 Nursing Related to Health Deviation I****5 Credits**

Prerequisites: NUR 150 - Nursing and Universal Needs and NUR 151 - Nursing and Universal Needs Practicum. Corequisites: NUR 153 - Nursing Related to Health Deviation I Practicum. Defines the role of the associate degree nurse in assisting clients experiencing health deviations related to nutrition/elimination, rest/activity, safety and homeostasis. The nursing process is utilized to promote, maintain and restore health or support death with dignity in the adult client.

**NUR 153 Nursing Related to Health Deviation I Practicum****5 Credits**

Prerequisites: NUR 150 - Nursing and Universal Needs and NUR 151 - Nursing and Universal Needs Practicum. Corequisites: NUR 152 - Nursing Related to Health Deviation I. Provides experience that enables the student to progress in the role of the associate degree nurse when providing care to adult clients experiencing health deviations. The nursing process guides the application of scientific facts, concepts, principles and rationales in the delivery of nursing care. Psychomotor skills and appropriate therapeutic communication are emphasized.

**NUR 154 Pharmacotherapeutics****2 Credits**

Prerequisites: Admission to program. Introduces the student to the fundamental principles of drug action, the classification of drugs and the appropriate nursing actions to achieve the desired outcomes of therapy. The nursing process as a framework for learning is integrated throughout the course.

**NUR 248 Transition to ASN Nursing****5 Credits**

Prerequisites: Admission to program, ANP 101 - Anatomy and Physiology I, ANP 102 - Anatomy and Physiology II, ENG 111 - English Composition, MAT 111 - Intermediate Algebra, PSY 101 - Introduction to Psychology, current Indiana LPN license, and official transcript from PN program. Examines the role of the associate degree nurse. Identifies components of the ASN program philosophy. Reviews the facts, concepts and principles underlying the nursing process. Laboratory and clinical experience is provided to review basic nursing skills and assist the student in identifying appropriate nursing responses to health deviation needs.

**NUR 250 Nursing Related to Health Deviation II****5 Credits**

Prerequisites: NUR 152 - Nursing Related to Health Deviation Needs I and NUR 153 - Nursing Related to Health Deviation Needs I Practicum. Corequisites: NUR 251 - Nursing Related to Health Deviation II Practicum. Defines the role of the associate degree nurse in assisting clients experiencing health deviations related to oxygenation, social interaction/solitude and continued health deviations of safety and homeostasis. The nursing process with emphasis on planning, intervention and evaluation is utilized to promote, maintain and restore health or support death with dignity in the adult client. Leadership skills and advanced therapeutic communication are also emphasized.

**NUR 251 Nursing Related to Health Deviation II Practicum****5 Credits**

Prerequisites: NUR 152 - Nursing Related to Health Deviation I and NUR 153 - Nursing Related to Health Deviation I Practicum. Corequisites: NUR 250 - Nursing Related to Health Deviation II. Provides experiences that allow the student to further refine the role of the associate degree nurse in providing care to clients experiencing health deviations. The nursing process guides the application of scientific facts, concepts and principles in the delivery of nursing care. Leadership skills and advanced therapeutic communication are also applied.

**NUR 252 Nursing Related to Developmental Needs****4 Credits**

Prerequisites: NUR 152 - Nursing Related to Health Deviation I and NUR 153 - Nursing Related to Health Deviation I Practicum. Corequisites: NUR 253 - Nursing Related to Developmental Needs Practicum. Identifies the role of the associate degree nurse in assisting clients to meet their developmental needs which includes the maintenance of conditions to support life processes and maturation. Utilizes the nursing process with emphasis on planning, implementation and evaluation. It will be utilized to evaluate therapeutic measures that promote, maintain, and restore health or support death with dignity.

**NUR 253 Nursing Related to Developmental Needs Practicum****4 Credits**

Prerequisites: NUR 152 - Nursing Related to Health Deviation I and NUR 153 - Nursing Related to Health Deviation I Practicum. Corequisites: NUR 252 - Nursing Related to Developmental Needs. Provides experiences that allow the student to further refine the role of the associate degree nurse when providing care to the childbearing and childbearing family experiencing developmental needs which includes the maintenance of conditions to support life processes and maturation. The nursing process guides the application of scientific facts, concepts, principles and rationales in the delivery of nursing care. Decision making and appropriate therapeutic communication are also emphasized.

**NUR 254 Professional Nursing Issues****2 Credits**

Prerequisites: Successful completion of previous semester. Examines issues and nursing's responsibility to meet changing needs of persons in their environment. Historical aspects, current developments, future trends, improvement of nursing practice, legal/ethical considerations, and personal/professional growth are integrated into the examination of the role of the associate degree nurse.

**NUR 260 Understanding Pathophysiology****3 Credits**

Prerequisites: None. Provides basic and easy to understand information about pathophysiological mechanisms and manifestations of disease. Builds on the concepts mastered in anatomy and physiology and nursing theory courses.

**OAD 019 Keyboarding****3 Credits**

Prerequisites: None. Provides students with the fundamentals of keyboarding using the touch method. Emphasizes mastery of the keyboard, development of formatting skills and development of speed and accuracy.

**OAD 029 Speed and Accuracy Development****1 Credit**

Prerequisites: OAD 019 - Keyboarding. Designed to diagnose individual keyboarding speed and accuracy skills and bring those skills to an employable level.

**OAD 103 Word Processing Applications****3 Credits**

Prerequisites: Typing proficiency of 30 GWAM and basic formatting, or OAD advisor approval. Introduces the concepts of word processing systems. Offers hands-on experience in the operation of a specific word processing software package.

**OAD 108 Shorthand/Notetaking I****3 Credits**

Prerequisites: None. This course introduces basic principles of a note-taking system. Emphasis is placed on note-taking techniques, legibility, and mastery of the basic vocabulary. Dictation and transcription of material is included.

**OAD 110 Presentation Graphics****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or equivalent. Provides "hands-on" experience and familiarizes students with specific advanced design and layout techniques and practical applications of business presentations.

**OAD 114 Desktop Publishing****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or equivalent. Emphasizes the production of publication-quality documents. Attention is given to design and layout principles and production techniques. Fonts, graphics and page composition are integrated into camera-ready documents using computer software and hardware.

**OAD 116 Essentials of Business Correspondence****3 Credits**

Prerequisites: ENG 025 - Introduction to College Writing II. An intensive, competency-based business correspondence course that involves grammar, word usage, pronunciation, punctuation, proofreading, spelling, vocabulary building and other language skills that are essential to good workplace communication.

**OAD 119 Document Processing****3 Credits**

Prerequisites: Entry level proficiency of 35 gwpm and basic formatting. Emphasis is placed on increasing speed, improving accuracy, developing and applying formatting skills, applying communication and language arts skills and developing document production techniques.

**OAD 121 Office Procedures****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Prepares the student to understand and carry out responsibilities assigned in a business office. Topics include telephone techniques, office equipment, travel and conference arrangements, professional development, research techniques, time and stress management and business ethics.

**OAD 207 Integrated Applications****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or equivalent experience. Explores the advanced features of an integrated office software package using word processing, spreadsheets, databases and presentation graphics.

**OAD 211 Medical Transcription****3 Credits**

Prerequisites: HHS 101 - Medical Terminology and OAD 119 - Document Processing with an entry-level speed of 40 GWAM with a 5 error limit. Develops skills and knowledge of medical transcription utilizing medical reports, terminology and correspondence.

**OAD 214 Multimedia Design****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Continues the production of publication-quality documents. Attention is given to design and layout principles and production techniques. Color and editing graphics and photographs will be introduced. Students will also apply their design skills to preparing documents for electronic publishing on the World Wide Web.

**OAD 215 Legal Transcription****3 Credits**

Prerequisites: OAD 119 - Document Processing with an entry-level speed of 40 GWAM with a 5 error limit. Provides hands-on training in formatting legal correspondence and court documents in the basic areas of law. Students will learn specialized rules of punctuation, terminology and standards for legal documents. In a laboratory setting students will learn how to use a transcribing machine to produce legal documents from tape dictation.

**OAD 216 Business Communications****3 Credits**

Prerequisites: ENG 111 - English Composition, CIS 101 - Introduction to Microcomputers. Emphasizes analysis of business communication environments—cultural, organizational, technological, international and interpersonal—and the use of communications standards to direct the choice of oral and written communication methods and techniques. It includes practice in writing a variety of messages used to communicate in business and industry with an emphasis on the potential impact of the message on the receiver as a basis for planning and delivering effective business communications.

**OAD 217 Problem Solving for Computer Users****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Introduces the organization, structure and functions necessary for managing and maintaining information systems within a business organization. Presents the student with basic computer system concepts such as file and resource management, device drivers, file structures, hard disk organization, software installation, upgrading and maintenance and fundamental data security techniques. These concepts will be incorporated into practical applications.

**OAD 218 Spreadsheets****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Provides an in-depth understanding of worksheet design, charting, what-if analysis, worksheet database creation and manipulation and OLE. Knowledge and use of a spreadsheet will be applied to various business applications. Integration of spreadsheets in other applications will be addressed.

**OAD 219 Advanced Document Processing****3 Credits**

Prerequisites: Entry level proficiency of 45 wpm and formatting. Emphasis is on a high degree of competence in an office-like environment processing documents on a personal computer using an up-to-date software package.

**OAD 220 Records and Database Management****3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Focuses on the management and control of documents from creation to disposition using manual, automated, and electronic media. Examines filing procedures, records management personnel, and equipment. Uses database software to create, modify, query, and report information from a database.

**OAD 221 Office Administration and Supervision****3 Credits**

Prerequisites: OAD 216 - Business Communications. Completion of minimum of 45 credits toward degree. Emphasizes management of office functions. Key topics include personnel, team building, ergonomics, project management and leadership styles. Case studies and role playing projects are included. Students will also complete the program outcomes assessment tool.

**OAD 226 Advanced Electronic Spreadsheets****3 Credits**

Prerequisites: OAD 218 - Spreadsheets. Continues the study of electronic spreadsheets in business. Emphasizes the advanced application of electronic spreadsheets.

**OAD 280 Co-op/Internship/Externship/Practicum****1-6 Credits**

Prerequisites: OAD 216 - Business Communications. Completion of minimum of 45 program credits toward degree or advisor approval. Students gain on-the-job experience while earning college credits towards an associate degree.

**OAD 281-294 Special Topics in Office Administration****1-3 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**OPM 102 Techniques of Supervision I****3 Credits**

Prerequisites: None. Introduces basic employee development with emphasis on the responsibilities of a newly appointed supervisor. Emphasizes organizational structure, motivation, delegation of authority, interviews, orientation and induction of new employees, employee performance evaluations and dealing with employee conflict.

**OPM 103 Industrial Safety I****3 Credits**

Prerequisites: None. Covers the day to day responsibilities of management and supervision toward attaining an accident-free organization. Emphasizes first aid, fire prevention and control, safety procedures in starting and stopping machines, accident investigations and other preventive measures. Covers methods of advertising good safety practices and rules of plant protection in relation to safety and OSHA.

**OPM 104 Techniques of Supervision II****3 Credits**

Prerequisites: OPM 102 - Techniques of Supervision I. Develops skills for effective supervision of employees by utilizing analysis of cases, group discussion, in-basket exercises and role-playing. Includes problem solving techniques, labor relations, legal guidelines, policy making, counseling troubled employees, effective communications and human relations skills.

**OPM 205 Techniques of Leadership****3 Credits**

Prerequisites: OPM 102 - Techniques of Supervision I. Identifies approaches to effective leadership and discovers an appropriate personal leadership style. Explores specific qualities and skills needed for conference leadership (organizing, facilitating, controlling, summarizing, speaking, and problem defining and solving).

**OPM 211 Labor Relations****3 Credits**

Prerequisites: None. Examines labor laws and practices pertaining to industrial relations. Covers development and application of laws, mediation conciliation, collective bargaining, arbitration and handling of grievances.

**OPM 224 Operations Management****3 Credits**

Prerequisites: MAT 112 - Functional Mathematics or MAT 111 - Intermediate Algebra. Studies the efficient production of goods and services that will satisfy the wants and needs of identified customer groups. Focuses on the acquisition of the factors of production, efficient use of those factors and distribution of the output of the production process. Includes discussion of the need for quality and its measurement.

**OTA 101 Foundations of Occupational Therapy****3 Credits**

Prerequisites: Admission to the OTA program. Establishes a philosophical base for subsequent course work by introducing and examining concepts basic to the study of occupational therapy assistant.

**OTA 102 Kinesiology****2 Credits**

Prerequisites: None. Corequisites: OTA 101 - Foundations of Occupational Therapy and OTA 103 - Medical Conditions in Occupational Therapy. Examines principles of human movement including analysis of biomechanics, joint structure and function and musculoskeletal function. Manual muscle testing and goniometric measurement are also covered.

**OTA 103 Medical Conditions in Occupational Therapy****3 Credits**

Prerequisites: None. Corequisites: OTA 101 - Foundations of Occupational Therapy and OTA 102 - Kinesiology. Provides a basic understanding of physical conditions commonly referred to occupational therapy. Typical occupational therapy treatment plans and goals are discussed for selected conditions. The concept of wellness and holistic medicine also is introduced.

**OTA 201 Field Work 1-A****1 Credit**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, and OTA 204 - Psychiatric Conditions in Occupational Therapy. Corequisites: OTA 202 - Therapeutic Activities, OTA 203 - Therapeutic Group Activities, OTA 205 - COTA in Physical Health, OTA 206 - Assistive Technology and Adaptive Equipment, and permission from program chair. Offered the first summer session after the general education is completed. Most of the general education has occurred and the student has a foundation for understanding normal human development. Allows the student to be in a clinical setting and to initiate observation and notewriting skills.

**OTA 202 Therapeutic Activities****3 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102, Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, and OTA 204 - Psychiatric Conditions in Occupational Therapy. Corequisites: OTA 201 - Field work 1 - A, OTA 203 - Therapeutic Group Activities, OTA 205 - COTA in Physical Health, and OTA 206 - Assistive Technology and Adaptive Equipment. Provides learning experiences in the following categories of therapeutic activities: crafts, sensory awareness, movement awareness, fine arts, construction, games, self-care, domestic, textiles, vocational, recreational and educational. Emphasizes activity analysis and the individualization of activity selection.

**OTA 203 Therapeutic Group Activities****3 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, and OTA 204 - Psychiatric Conditions in Occupational Therapy. Corequisites: OTA 202 - Therapeutic Activities, OTA 205 - COTA in Physical Health, and OTA 206 - Assistive Technology and Adaptive Equipment. Provides experiential learning in the analysis and therapeutic use of a variety of group activities used in occupational therapy. Analyzes selected activities in terms of occupational performance, human development and adaptation to meet client needs.

**OTA 204 Psychiatric Conditions in Occupational Therapy****3 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, and OTA 103 - Medical Conditions in Occupational Therapy. Reviews psychiatric disorders and the interdisciplinary approach to the conditions commonly referred to occupational therapy. Topics of discussion will include clinical team approach, legal issues, nomenclature, clinical description and etiology of psychiatric disabilities.

**OTA 205 COTA in Physical Health****3 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, and OTA 204 - Psychiatric Conditions in Occupational Therapy. Corequisites: OTA 201 - Fieldwork 1 - A, OTA 202 - Therapeutic Activities, OTA 203 - Therapeutic Group Activities, and OTA 206 - Assistive Technology and Adaptive Equipment. Presents assistant-level techniques for management of clinical physical dysfunction cases referred to occupational therapy. Includes initial screening, evaluation, treatment planning and implementation, intervention and prevention techniques as utilized by occupational therapy assistants in a variety of clinical settings and specific physical dysfunction diagnoses treated by occupational therapy.

**OTA 206 Assistive Technology and Adaptive Equipment****2 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, and OTA 204 - Psychiatric Conditions in Occupational Therapy. Corequisites: OTA 201 - Fieldwork 1 - A, OTA 202 - Therapeutic Activities, OTA 203 - Therapeutic Group Activities, and OTA 205 - COTA in Physical Health. Provides supervised learning experience in the application of assistive technology in occupational therapy. Includes experiential learning in the analysis, selection, use, adjustment, adaptation and/or fabrication of assistive technological devices.

**OTA 207 Daily Living Skills****3 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, OTA 201 - Fieldwork 1 - A, OTA 204 - Psychiatric Conditions in Occupational Therapy, OTA 205 - COTA in Physical Health, and OTA 206 - Assistive Technology and Adaptive Equipment. Corequisites: OTA 208 - COTA and Interactive Model, OTA 209 - Fieldwork 1 - B, OTA 210 - COTA in Mental Health, and OTA 211 - Clinic Transition and Management. Provides the occupational therapy assistant student with supervised learning experiences in independent living skills which emphasize patient independence in personal mobility, self-care, communication, transportation, family living, work and leisure skills. Addresses independent living skills in physical dysfunction, psycho-social dysfunction and pediatrics.

**OTA 208 COTA and Interactive Model****3 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, OTA 201 - Fieldwork I - A, OTA 202 - Therapeutic Activities, OTA 203 - Therapeutic Group Activities, OTA 205 - Psychiatric Conditions in Occupational Therapy, and OTA 206 - Assistive Technology and Adaptive Equipment. Corequisites: OTA 207 - Daily Living Skills, OTA 209 - Fieldwork I - B, OTA 210 - COTA in Mental Health, and OTA 211 - Clinical Transition and Management. Provides the occupational therapy assistant student with a basis from which to understand and provide therapeutic activities in a non-medical setting. Presents techniques for a variety of populations in settings such as schools, nursing homes, adult day care and sheltered workshops.

**OTA 209 Field Work 1-B****1 Credit**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, OTA 201 - Fieldwork I - A, OTA 202 - Therapeutic Activities, OTA 203 - Therapeutic Group Activities, OTA 205 - COTA in Physical Health, and OTA 206 - Assistive Technology and Adaptive Equipment. Corequisites: OTA 207 - Daily Living Skills, OTA 208 - COTA and Interactive Model, OTA 210 - COTA in Mental Health, OTA 211 - Clinic Transition and Management, and permission from program chair. Provides for clinical observation and practice of the occupational therapy skills and processes presented in previous and current courses in the curriculum. Emphasizes interviewing/structured evaluation, treatment planning, implementation, and discharge. Requires weekly seminar attendance.

**OTA 210 COTA in Mental Health****3 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medication Conditions in Occupational Therapy, OTA 201 - Fieldwork I - A, OTA 202 - Therapeutic Activities, OTA 203 - Therapeutic Group Activities, OTA 204 - Psychiatric Conditions in Occupational Therapy, and OTA 205 - COTA in Physical Health. Corequisites: OTA 207 - Daily Living Skills, OTA 208 - COTA and Interactive Model, OTA 209 - Fieldwork I - B, and OTA 211 - Clinical Transition and Management. Presents the psychiatric occupational therapy process and the role of the COTA with psychiatric cases referred to occupational therapy. Includes initial screening, evaluation, treatment planning and implementation of programs for patients/clients.

**OTA 211 Clinical Transition and Management****4 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, OTA 201 - Fieldwork I - A, OTA 202 - Therapeutic Activities, OTA 203 - Therapeutic Group Activities, OTA 204 - Psychiatric Conditions in Occupational Therapy, and OTA 205 - COTA in Physical Health. Corequisites: OTA 207 - Daily Living Skills, OTA 208 - COTA and Interactive Model, OTA 209 - Fieldwork I - B, and OTA 210 - COTA in Mental Health. Presents basic theory, techniques and skills necessary for the transition into the clinical setting and for the management of an activities program. Presents management information as it relates to the role of the COTA along with an examination of the qualities necessary for success in the clinical setting.

**OTA 212 Field Work 2-A****2 Credits**

Prerequisites: Successful completion of all didactic portions of program and permission from program chair. Provides an in-depth experience and opportunity to apply the knowledge, skills and attitudes learned through the coursework of the Occupational Therapy Assistant program. Students deliver occupational therapy services to clients with a variety of ages and conditions and gain experience specific to the role and functions expected of an entry-level occupational therapy assistant.

**OTA 213 Field Work 2 - B****2 Credits**

Prerequisites: Successful completion of all didactic portions of program and permission from program chair. \*NOTE: To ensure continuity of application of academic concepts, all fieldwork should be completed within 18 months following completion of academic preparation. THERE ARE NO EXCEPTIONS TO THIS GUIDELINE. Provides an in-depth experience and opportunity to apply the knowledge, skills and attitudes learned through the coursework of the Occupational Therapy Assistant program. Students deliver occupational therapy services to clients with a variety of ages and conditions and gain experiences specific to the role and functions expected of an entry-level occupational therapy assistant.

**PAR 102 Emergency Medical Technician - Basic Training****7.5 Credits**

Prerequisites: Demonstrated competency in reading, writing and mathematics through appropriate assessment or successful completion of basic skills courses. Requires laboratory practice and clinical observation in a hospital emergency room, nursing home and ambulance. Covers theories, techniques and operational aspects of prehospital emergency care within the scope and responsibility of the emergency medical technician (EMT). Prepares students for the state certification.

**PAR 113 Preparatory I****2.5 Credits**

Prerequisites: Certification as an EMT; course application and physical exam on file; twenty hours verified ambulance compartment time within the last year; CPR Certification American Heart Type C or Red Cross - Professional Rescuer; successful completion of written and practical entrance exams; positive evaluation by selection committee; proof of immunity to Rubella and Hepatitis B; completion of Ivy Tech State College Asset exam. Introduces the legal, moral and ethical responsibilities of the health care professional. Provides an overview of the Emergency Medical Services System and its components and their relationships. Introduces the essential principles of the standard of care, medical liability, areas of potential medical liability and medical liability protection. Provides an overview to stress, reactions to stress, anxiety, paramedic job stress and dealing with death and dying. Presents the essentials of pathophysiology and how the understanding of disease processes will improve upon the level of care provided by the paramedic.

**PAR 114 Preparatory II****3.5 Credits**

Prerequisites: PAR 113 - Preparatory I. Introduces aspects of pharmacology including drug information, action of drugs, weights and measures and the administration and techniques of administering drugs. Includes the essentials of venous access, therapeutic communications and lifespan development.

**PAR 115 Airway, Patient Assessment****5 Credits**

Prerequisites: PAR 114 - Preparatory II. Emphasizes the fundamentals of airway management including airway anatomy and physiology, assessment, management, ventilation and suction. General patient assessment, initial management including scene survey, initial assessment, resuscitation, focused/detailed exam, history, definitive field management and reevaluation are also introduced. Provides the opportunity to practice and perform patient assessment, IV techniques and endotracheal intubation in emergency and operating rooms.

**PAR 200 Trauma****3 Credits**

Prerequisites: PAR 115 - Airway, Patient Assessment. Overviews kinematics, primary survey, resuscitation, secondary survey and management and monitoring and transporting trauma victims. The pathophysiology of shock, care of shock and victim oxygenation are covered. Defines parameters and discusses anatomy and physiology as related to burn injury, presents pathophysiology related to a specific source of burn injury and presents patient-related detail assessment and specific management of burns. Basic Trauma Life Support certification is obtained.

**PAR 210 Medical I****6 Credits**

Prerequisites: PAR 200 - Trauma. Covers in detail pulmonology, respiratory management and pharmacological interventions. Cardiology and dysrhythmia recognition relative to prehospital intervention are emphasized. Advanced Cardiac Life Support certification is obtained.

**PAR 213 Medical II****6.5 Credits**

Prerequisites: PAR 210 - Medical I. Reviews etiology and treatment of medical emergencies associated with the nervous, endocrine and reproductive systems. Includes allergies and anaphylaxis, gastroenterology, toxicology, hematology, infectious and communicable diseases, environmental conditions and behavioral and psychiatric disorders. Allows the student to perform in ER and ICU settings.

**PAR 215 Special Considerations****5 Credits**

Prerequisites: PAR 213 - Medical II. Pediatrics, geriatrics and interventions for the chronic care patient and assessment based management are covered. Neonatology and Neonatal Advanced Life Support (NALS) certification are obtained. Skills in ER, L&D, pediatric units and psychiatric care facilities are fine-tuned.

**PAR 220 Operations****2.5 Credits**

Prerequisites: PAR 215 - Special Considerations. Provides for the awareness of the concepts of rescue and the preparation for a response to a scene/incident. Presents the essentials of crime scene awareness, medical incident command and hazardous materials operations.

**PAR 221 Ambulance Internship****6 Credits**

Prerequisites: PAR 220 - Operations. Students participate in a field internship, which provides on the job experience in all phases of prehospital advanced life support.

**PHO 104 Basic Photography****3 Credits**

Prerequisites: None. Covers basic black and white photographic theory and technique. Includes basic black and white darkroom processes and physics of light and filters. Studies cameras and lenses, characteristics of films and papers, and the chemistry of emulsions, exposure and development.

**PHO 106 Studio Practices****3 Credits**

Prerequisites: None. Introduces studio work in black and white photography using continuous light sources. Covers basic set-up techniques and lighting methods for a variety of subject matter. Includes practice with photo flood lamps and quartz lamps, both floods and spot and a variety of equipment used to modify light.

**PHO 107 Intermediate Photography****3 Credits**

Prerequisites: PHO 104 - Basic Photography. Develops advanced camera skills with medium and large format view cameras. Covers techniques for photographing in a variety of picture taking situations. Includes special darkroom techniques and processes. Emphasizes good composition and the use of photography as a communications tool.

**PHO 109 Studio Lighting Techniques****3 Credits**

Prerequisites: PHO 106 - Studio Practices. Covers techniques for multiple lighting set-ups, studio electronic flash, location lighting, special effects and large sets.

**PHO 110 History of Photography****3 Credits**

Prerequisites: None. Surveys technological, aesthetic, social and political changes that the medium of photography has undergone. Studies and recreates nineteenth century processes. Includes visits to historical archives to view prints.

**PHO 201 Principles of Color Photography****3 Credits**

Prerequisites: PHO 104 - Basic Photography. Develops camera and laboratory skills needed for color negative and color positive processes through work with state-of-the-art equipment and techniques. Encompasses color psychology and aesthetics as well as the physics and chemistry of color photography.

**PHO 202 Advanced Process and Techniques****3 Credits**

Prerequisites: PHO 201 - Principles of Color Photography. Covers specialized techniques used by commercial photography labs such as masking internegatives, use of print film, litho film, production techniques and retouching.

**PHO 203 Professional Portraiture****3 Credits**

Prerequisites: PHO 107 - Intermediate Photography and PHO 201 - Principles of Color Photography. Explores approaches and methods in traditional and alternative portraiture in studio and on-location photography. Emphasizes creative approaches to commercial portraiture.

**PHO 204 Commercial Photography Techniques I****3 Credits**

Prerequisites: PHO 107 - Intermediate Photography and PHO 201 - Principles of Color Photography. Introduces studio and lab techniques used in advertising and industrial photography. Emphasizes creative problem solving and business communications.

**PHO 205 Commercial Photography Techniques II****3 Credits**

Prerequisites: PHO 204 - Commercial Photography Techniques I. Explores special techniques used in advertising and industrial photography such as those used in on-location product photos, products with models, food illustrations and multi-image slide presentations.

**PHO 206 Special Projects I****3 Credits**

Prerequisites: All courses from previous semesters' course work to semester in which special projects occur. Accommodates students' interests in specific areas of their fields or in areas where there is a need to strengthen skills. Requires performance and completed work to be portfolio quality and reflect applicability to the main areas of design, production, and/or illustration.

**PHO 207 Special Projects II****3 Credits**

Prerequisites: PHO 206 - Special Projects I and PHO 208 - Independent Study I. Provides specific experiences in selected areas. Requires instructor approval prior to project work.

**PHO 208 Independent Study I****3 Credits**

Prerequisites: All second semester technical courses. Provides students with opportunities to design a project for specific areas. Requires students to develop a plan to show what the project outcomes/results will be. Restricts work to the program area and must be portfolio quality.

**PHO 209 Independent Study II****3 Credits**

Prerequisites: First three semesters. Provides students with the opportunity to develop skills in specific areas of a visual communications program or to elect a course from the College curriculum which supports a career in their chosen program. Requires program chairperson approval to elect non-program course work. Requires instructor approval for program projects.

**PHO 214 Journalistic and Editorial Photography****3 Credits**

Prerequisites: PHO 107 - Intermediate Photography. Gives students the opportunity to photograph events and human interest features to gain experience in contributions to various publications. Emphasizes establishing visual relationships in the photo essay.

**PHO 216 Advanced Processes and Production Techniques****3 Credits**

Prerequisites: None. Introduces specialized lab techniques in traditional and digital formats. Works with contemporary experimental darkroom techniques. Covers issues in prepress production as they relate to the photographer. Teaches halftone and color separation techniques as well as the use of typography with photographs.

**PHO 218 Fine Art Photography****3 Credits**

Prerequisites: None. Examines current issues in non-commercial photography. Explores attitudes of photographers and critics on a wide range of topics through directed reading, class discussion and gallery visits.

**PHO 220 Sensitometry****3 Credits**

Prerequisites: PHO 104 - Basic Photography. Estimates response of photographic materials to radiant energy including methods of exposing, processing, measurement and data evaluation.

**PHO 222 Electronic Photography****3 Credits**

Prerequisites: None. Examines the area of still video photography and various electronic darkroom software packages. Includes editing processes, manipulating images in black-and-white and color and working with various output devices.

**PMT 101 Introduction to Plastics****3 Credits**

Prerequisites: None. Introduces plastic processing industries, techniques and commonly used polymers.

**PMT 106 Introduction to Polymer Science****3 Credits**

Prerequisites: PMT 101 - Introduction to Plastics. Introduces structure, properties and processing characteristics of plastic polymers and additives.

**PMT 107 Injection Molding****3 Credits**

Prerequisites: PMT 101 - Introduction to Plastics. Expands student knowledge of the injection molding process, components and industry.

**PMT 108 Extrusion Processes****3 Credits**

Prerequisites: PMT 101 - Introduction to Plastics. Introduces the extrusion process, equipment and industrial applications.

**PMT 201 Advanced Injection Molding****3 Credits**

Prerequisites: PMT 107 - Injection Molding. Covers the procedures and techniques necessary to fully utilize the capabilities of modern injection molding equipment to properly process thermoplastic materials.

**PMT 202 Advanced Extrusion****3 Credits**

Prerequisites: PMT 108 - Extrusion Processes. Covers the procedures and techniques necessary to fully utilize the capabilities of modern extrusion equipment to properly process thermoplastic materials.

**PMT 208 Computer Applications in Plastics****3 Credits**

Prerequisites: PMT 107 - Injection Molding, PMT 108 - Extrusion Processes. Introduces the computer products and services available to aid in the design and manufacturing of plastic products.

**PMT 209 Manufacturing of Plastics Products****3 Credits**

Prerequisites: PMT 101 - Introduction to Plastics, PMT 107 - Injection Molding, PMT 108 - Extrusion Processes. Discusses the economic, organizational and quality control strategies employed for efficient production of plastics. Introduces the major secondary finishing, decorating and joining techniques. Develops an understanding of the practical considerations of manufacturing operations.

**PNU 114 Nursing Issues and Trends****1 Credit**

Prerequisites: Admission to the PN program. Focuses on nursing history, ethical and legal issues. Examines the organizational patterns and roles of the practical nurse in the health care delivery system. Emphasizes life-long learning.

**PNU 121 Introduction to Nursing I****4 Credits**

Prerequisites: Admission to the PN program. Corequisites: ANP 102 - Anatomy and Physiology II or PNU 126 - Integrated Life Science. Introduces the role of the practical nurse as a member of the health care team. The nursing process is the basis for providing care within the wellness/illness continuum. Focuses on the application of basic nursing skills essential in meeting biological, psychosocial, cultural and spiritual needs of individuals in preventive, therapeutic and rehabilitative environments.

**PNU 122 Introduction to Nursing II****6 Credits**

Prerequisites: PNU 121 - Introduction to Nursing I. Focuses on the progression of learning nursing skills. Emphasizes application of safe nursing practice in the clinical setting. Introduces drug administration, dosage calculations and mental health concepts.

**PNU 123 Pharmacology****3 Credits**

Prerequisites: Admission to the PN program; approval of program chair. Studies pharmacological agents, including classifications, actions, side effects, interactions and nursing implications.

**PNU 126 Integrated Life Science****5 Credits**

Prerequisites: Successful completion of ASSET and/or basic skills. Approval of program chair. Examines physical/chemical factors that enable man to maintain homeostasis of the internal environment. Emphasizes anatomy and physiology. Integrates concepts of chemistry, nutrition and microbiology.

**PNU 127 Care of the Adult I****5 Credits**

Prerequisites: PNU 122 - Introduction to Nursing II and ANP 102 - Anatomy and Physiology II or PNU 126 - Integrated Life Science. Focuses on the application of the nursing process in understanding the pathophysiology and nursing care of clients with circulatory, ventilation and immunity dysfunctions. Emphasizes meeting biological, psychosocial, cultural and spiritual needs in selected environments. Theory is applied in clinical component.

**PNU 128 Care of the Adult II****5 Credits**

Prerequisites: PNU 122 - Introduction to Nursing II and ANP 102 - Anatomy and Physiology II or PNU 126 - Integrated Life Science. Focuses on the application of the nursing process in understanding the pathophysiology and nursing care of clients with nutrition, elimination, reproduction and hormone dysfunctions. Emphasis will be on meeting biological, psychosocial, cultural and spiritual needs in selected environments. Theory is applied in clinical component.

**PNU 129 Care of the Adult III****5 Credits**

Prerequisites: PNU 122 - Introduction to Nursing II and ANP 102 - Anatomy and Physiology II or PNU 126 - Integrated Life Science. Focuses on the application of the nursing process in understanding the pathophysiology and nursing care of clients with mobility, neurological, sensory and dermatological dysfunctions. Emphasis will be on meeting biological, psychosocial, cultural and spiritual needs in selected environments. Theory is applied in clinical component.

**PNU 130 Nursing Care of the Older Adult****5 Credits**

Prerequisites: ANP 102 - Anatomy and Physiology II or PNU 126 - Integrated Life Science, and PNU 122 - Introduction to Nursing II. Focuses on the application of the nursing process in meeting biological, psychosocial, cultural and spiritual needs of older clients in selected environments. Preventive, therapeutic, rehabilitative care, and in support of death with dignity are major components. Theory is applied in the clinical setting.

**PNU 131 Nursing Care of the Childbearing Family****6 Credits**

Prerequisites: ANP 102 - Anatomy and Physiology II or PNU 126 - Integrated Life Science, and PNU 122 - Introduction to Nursing II. Emphasis is on the normal reproductive cycle and normal growth and development of the child within the wellness/illness continuum. Examines conditions and selected interventions based on the nursing process, in providing preventive, therapeutic and rehabilitative care for the mother and child. The role of the practical nurse is identified in providing holistic care to the childbearing family within the clinical setting.

**PST 120 First Responder****3 Credits**

Prerequisites: None. Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies and apply appropriate first aid. Addresses handling of victims of hazardous materials accidents. Covers CPR, including one and two rescuer, and adult, infant and child resuscitation.

**PST 121 Risk Management****3 Credits**

Prerequisites: None. Introduces occupational safety and health standards and codes with emphasis on applications of codes to typical work situations and MSDS requirements. Includes emergency first aid, safety protection, eye protection and chemicals handling. Covers employer and employee rights as well as violations, citations, penalties, variances, appeals and record keeping.

**PST 220 Incident Management Systems****3 Credits**

Prerequisites: Advisor approval. Emphasizes the command and control of major department operations at an advanced level, linking operations and safety. Areas of study include incident management systems, pre-incident, size-up, command systems, sectoring functions, staging, safety officer, command post, communications, news media and computer aided resources. Utilizes simulated incidents requiring the applications of appropriate solutions.

**PST 221 Computer Design and Planning****3 Credits**

Prerequisites: TEC 104 - Computer Fundamentals for Technology. Focuses on the needs and uses of the computer in public safety. Includes computer-aided dispatch, advanced levels of cameo, I-Chiefs, computer-aided design of equipment, generation of incident reports, application of computers for the budgetary process, computer-aided resource and materials, maintenance, test records of vehicles and the GIS program.

**PST 280 Co-op/Internship****3 Credits**

Prerequisites: Students must have completed a minimum of 30 credits toward their degrees with at least a 3.0 cumulative grade point average. Gives students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

**PST 281-294 Special Topics in Public Safety****1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**PTA 101 Introduction to Physical Therapist Assisting****3 Credits**

Prerequisites: None. Explores the history and concepts of physical therapy; physical therapist assisting and rehabilitative medicine. Introduces fundamentals of patient care including universal precautions; body substance isolation; OSHA guidelines; patient assessment including vital signs; emergency procedures including CPR; body mechanics; and patient handling with applications of physics principles. Includes preparation of patients, treatment areas and equipment.

**PTA 102 Diseases, Trauma, and Terminology****3 Credits**

Prerequisites: ANP 101 - Anatomy and Physiology I and ANP 102 - Anatomy and Physiology II. Explores diseases and trauma which necessitate physical therapy for the client. Medical terminology, anatomy, physiology, psychology, disabilities and physics related to these conditions are discussed along with instrumentation, implants and fixation devices. Provides students with the opportunity to explore their own reactions to illness and disability and to discuss how to recognize patients' and families' reactions to illness and disability.

**PTA 103 Administrative Aspects of Physical Therapist Assisting****2 Credits**

Prerequisites: None. Addresses the legal and ethical aspects of physical therapist assisting and patient care along with charting, documentation, report writing, patient history procurement, record keeping, charges, insurance information including diagnostic and procedure coding, third party reimbursement, Medicare, Medicaid, electronic claims and patient rights including American Disabilities Act policy and architectural barriers identification. Discusses current issues in health care provision. Explores patient, family and professional communication techniques, body language and electronic communication as well as techniques in patient teaching. Includes performing within the limitations of scope of skills, basic principles of levels of authority and responsibility, planning, time management, supervisory process, performance evaluations, policies and procedures.

**PTA 106 PTA Treatment Modalities I****5 Credits**

Prerequisites: PTA 101 - Introduction to Physical Therapist Assisting, PTA 102 - Diseases, Trauma, and Terminology, and PTA 103 - Administrative Aspects of Physical Therapist Assisting. Continues concentration on the fundamentals of patient care including universal precautions, assessment of vital signs, CPR, body mechanics and patient positioning. Includes lectures, demonstrations and simulated patient problems in the laboratory portion of the course. Studies new techniques in depth, such as gait training, gait device selection, goniometry range of motion exercises and measuring. Introduces various modalities including hydrotherapy, thermo-therapy, massage, traction and intermittent compression techniques. Safety factors are emphasized in both the lectures and the laboratories. The laboratory provides the setting for the practice and implementation of theories and techniques of PTA 106. Students practice assessments and treatment methods on themselves and one another under the guidance and supervision of the laboratory instructor.

**PTA 107 Kinesiology****5 Credits**

Prerequisites: PTA 101 - Introduction to Physical Therapist Assisting, ANP 101 - Anatomy and Physiology I, ANP 102 - Anatomy and Physiology II, and SCI 111 - Physical Science. Introduces the physical therapist assistant student to the science of kinesiology. By definition, kinesiology is the study of movement. Studies human movement and brings together the fields of anatomy, physiology, physics and geometry. Prerequisite knowledge of skeletal and muscular anatomy and physiology is necessary. Class will consist of equal parts of lectures, demonstration and student participation in locating, observing and palpating various bony prominences and musculatures. Much of kinesiology requires independent study to memorize origin, insertion, action and innervation of all muscles. The knowledge gained in this course is an integral part of the students' background preparation for the practice of physical therapy.

**PTA 115 Clinical I****2 Credits**

Prerequisites: PTA 101 - Introduction to Physical Therapist Assisting, PTA 102 - Diseases, Trauma, and Terminology, PTA 103 - Administrative Aspects of Physical Therapist Assisting, and PTA 106 - PTA Treatment Modalities I. Requires the student to perform in a clinical environment with patients, using applications of theory and techniques of PTA 106, under the guidance of a registered physical therapist.

**PTA 205 Clinical II****5 Credits**

Prerequisites: PTA 106 - PTA Treatment Modalities I, PTA 107 - Kinesiology, and PTA 207 - PTA Treatment Modalities II. Requires the student to perform in a clinical environment with patients using applications of theories and techniques of PTA 207 under the guidance of a registered physical therapist.

**PTA 207 PTA Treatment Modalities II****5 Credits**

Prerequisites: PTA 106 - Treatment Modalities I and PTA 107 - Kinesiology. Reviews joint structure, muscle origins, insertions, innervations, actions and physiology. Covers normal and abnormal gait, orthotics and prostheses, arthritis and joint replacement and postural correcting exercise along with treatment principles and therapeutic exercises for the neck, back and peripheral joints. Discusses general exercise principles and progression of the orthopedic patient through an exercise program. Addresses appropriate applications of principles of physics and kinesiology.

**PTA 215 Clinical III****5 Credits**

Prerequisites: Completion of PTA 207 - PTA Treatment Modalities II, and PTA 106 - PTA Treatment Modalities I. Requires the student to perform in a clinical environment with patients using applications of theory and techniques of PTA 217 under the guidance of a registered physical therapist.

**PTA 217 PTA Treatment Modalities III****5 Credits**

Prerequisites: PTA 106 - PTA Treatment Modalities I and PTA 207 - PTA Treatment Modalities II. Provides an in-depth approach to therapeutic exercise as performed by the physical therapy assistant. Covers basic anatomy and physiology of the central and peripheral nervous systems and activities of daily living. Includes exercise physiology and neurophysiology and advanced principles and procedures of therapeutic exercise appropriate for cardiopulmonary, cardiovascular, orthopedic and neurologic conditions, stroke, spinal cord and peripheral nerve injuries. Discusses prevention measures, specialized techniques and the utilization of specialized therapeutic equipment and correlates them to exercise applications. Addresses appropriate applications of kinesiology and principles of physics. Provides practice and implementation of theories and techniques of PTA 106 and PTA 207 in the lab setting.

**PTA 224 Current Issues and Review****1 Credit**

Prerequisites: PTA 205 - Clinical II and PTA 215 - Clinical III. Teaches the sources of physical therapy research and discusses the recognition of the roles and responsibilities of physical therapy assistants. Requires completion and presentation of an independent project. Includes a comprehensive review of the course to prepare the student for licensure exam.

**QSC 101 Quality Control Concepts and Techniques I****3 Credits**

Prerequisites: None. Covers current quality control concepts and techniques in industry with emphasis on modern manufacturing requirements.

**QSC 102 Statistical Process Control****3 Credits**

Prerequisites: None. Studies the fundamental tools of statistical process control which are used in industry to reduce costs and increase productivity at a predictable quality level. Emphasizes principles and techniques of statistical process control to ensure that prevention instead of detection of problems is practiced. Includes basic statistical and probability theory, sampling techniques, process control charts, the nature of variation, histograms and attribute and variable charts.

**QSC 201 Advanced Statistical Process Control****3 Credits**

Prerequisites: QSC 102 - Statistical Process Control. Builds on the basic principles of QSC 102 with advanced techniques by industry to ensure economic production of goods based on defect prevention rather than defect detection. Covers the various decisions to modify, change or adjust processes based on statistical evidence. Stresses interpretation of statistical data and distinguishing between common and special causes of problems. Emphasizes appropriate use of control charts, trend analysis, assessing process and machine capability, evaluating the measurement process, using computers and automated data collection systems and implementation techniques.

**QSC 202 Quality Control Concepts and Techniques II****3 Credits**

Prerequisites: QSC 101 - Quality Control Concepts and Techniques I, QSC 102 - Statistical Process Control, MAT 115 - Statistics or advisor approval. Acquaints students with quality control systems. Emphasizes the systems approach to quality, establishing the quality system, and applying total quality control in the company.

**QSC 203 Metrology****3 Credits**

Prerequisites: None. Covers techniques of linear and angular measurement and applications for industrial processes and quality control.

**QSC 204 Total Quality Management****3 Credits**

Prerequisites: None. Teaches the philosophy of total quality management. Focuses on improving processes and reducing variation in systems. Covers management's role in improving aspects of manufacturing and service organizations to achieve quality improvement.

**QSC 206 ISO/QS 9000 Standards and Internal Auditing****3 Credits**

Prerequisites: QSC 101 - Quality Control Concepts and Techniques I, QSC 102 - Statistical Process Control or advisor approval. Teaches the basic principles of ISO 9000 standards, QS 9000 standard, ISO 14000 standard. Includes instruction on internal auditing with emphasis on the role of the internal auditor in regard to the maintenance of the quality system.

**QSC 208 - Project Management****3 Credits**

Prerequisites: QSC 101 - Quality Control Concepts and Techniques I, QSC 102 - Statistical Process Control or advisor approval. Teaches the basic principles of project management, team building and facilitation. Focus is on project planning, scheduling and controlling of both projects and budgets through completion. Covers the process of building and facilitating effective teams in the work force.

**QSC 280 Co-op/Internship****3 Credits**

Prerequisites: Students must have completed a minimum of 30 credits toward their degrees with at least a 3.0 cumulative grade point average. Gives students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit towards an associate degree.

**QSC 281-294 Special Topics in Quality Science****1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**RAD 101 Orientation and Nursing in X-Ray Technology****4 Credits**

Prerequisites: Acceptance into the program through appropriate assessment or successful completion of college entry courses. Covers seven units. Introduces radiology and prepares students for entry into a clinical setting.

**RAD 102 Principles of Radiographic Exposures I****2 Credits**

Prerequisites: RAD 107 - Radiation Physics. Presents individual and group characteristics needed to produce the ideal radiograph. Includes knowledge of interchangeability of mAs, kVp, film/screen combinations, distance and grids. Covers factors and considerations needed for pediatric techniques, calibration, heat unit calculation and technique chart construction.

**RAD 103 Radiographic Positioning I****3 Credits**

Prerequisites: Acceptance into program through appropriate assessment or successful completion of pre-college courses, CIS 101 - Introduction to Microcomputers and any other previous radiography courses. Correlates positioning, terminology, techniques and film critique with the examinations of chest, abdomen, upper extremity, upper/lower GI tracts and urinary tract.

**4 Credits****RAD 104 X-Ray Clinical Education I**

Prerequisites: Concurrent enrollment with RAD 103 - Radiographic Positioning I, completion of CIS 101 and other applicable courses. Follows category 2 of the competency lab model, which tests proficiency of skills from categories 1 and 2. Includes supervised clinical experience.

**3 Credits****RAD 105 Radiographic Positioning II**

Prerequisites: Successful completion of RAD 103 - Radiographic Positioning I, RAD 104 - X-Ray Clinical Education I and any other previous radiology course. Correlates all previous material related to anatomy and positioning, covers the areas of lower extremities, spine and thorax and advances knowledge in ethics and quality assurance.

**4 Credits****RAD 106 X-Ray Clinical Education II**

Prerequisites: RAD 103 - Radiographic Positioning I, RAD 104 - X-Ray Clinical Education I, Concurrent with RAD 105 - Radiographic Positioning II and all previous required radiology courses. Includes supervised clinical experience, utilizes Category 2 of the competency model and tests proficiency of skills from Categories 1 and 2.

**3 Credits****RAD 107 Radiation Physics**

Prerequisites: MAT 111 - Intermediate Algebra. Introduces physics as utilized in the production of X-rays. Includes laws of physics pertaining to atomic structure, chemical properties and reactions and electrical circuitry. Covers equipment and methods of generation and measurement of electricity.

**2 Credits****RAD 109 Imaging Techniques**

Prerequisites: Successful completion of any other previous radiology courses. Covers theories, principles and demonstrations of current imaging modalities.

**2 Credits****RAD 201 Radiographic Positioning III**

Prerequisites: RAD 103 - Radiographic Positioning I, RAD 105 - Radiographic Positioning II, and all other previous radiology courses. This course correlates positioning terminology and techniques, film critique, with exams of Category 2 of the competency models and testing skills from Category 1 and 2.

**4 Credits****RAD 202 X-Ray Clinical Education III**

Prerequisites: RAD 103 - Radiographic Positioning I, RAD 105 - Radiographic Positioning II, RAD 106 - X-Ray Clinical Education II, Concurrent with RAD 201 - Radiographic Positioning III, and all other previous program courses. Introduces Category 3 of the Competency Model, proficiency testing over Categories 1 and 2 and testing over Category 3.

**4 Credits****RAD 203 X-Ray Clinical Education IV**

Prerequisites: RAD 202 - X-Ray Clinical Education III, RAD 201 - Radiographic Positioning III, RAD 106 - X-Ray Clinical Education II, RAD 105 - Radiographic Positioning II, RAD 103 - Radiographic Positioning I, and concurrent with RAD 209 - Radiographic Positioning IV. Introduces Category 4 of the Competency Model in lab proficiency testing of skills from Categories 1, 2, 3 and proficiency in Category 4.

**4 Credits****RAD 204 X-Ray Clinical Education V**

Prerequisites: RAD 203 - X-Ray Clinical Education IV, RAD 201 - Radiographic Positioning III, RAD 106 - X-Ray Clinical Education II, RAD 105 - Radiographic Positioning II and RAD 103 - Radiographic Positioning I. Includes final competency testing for students who have not completed clinicals 1-4. Continues maintenance over all categories. Includes clinical experience.

**2 Credits****RAD 205 Pathology for Radiologic Technology**

Prerequisites: Successful completion of previous radiology courses. Examines basic concepts concerning disease, its causes and the resulting changes as viewed radiographically. Emphasizes needed technical changes to produce optimal radiographs from correlations to patient symptoms.

**3 Credits****RAD 206 Radiobiology and Radiation Protection**

Prerequisites: Successful completion of previous radiology courses. Covers theories and principles of the effects of ionizing radiation upon living tissues. Includes dosages, measurements, DNA structure and function and cellular radio sensitivity.

**2 Credits****RAD 208 Principles of Radiographic Exposures II**

Prerequisites: RAD 102 - Principles of Radiographic Exposures I. Continues RAD 102 - Principles of Radiographic Exposure I. Explains photo timing and its relationship to manual techniques. Associates kVp and mAs with the quality and quantity of radiation. Covers standard darkroom procedure, automatic processing and quality assurance.

**3 Credits****RAD 209 Radiographic Positioning IV**

Prerequisites: RAD 201 - Radiographic Positioning III and all other previous radiology courses. Covers all positions involving radiographic examinations.

**RAD 299 General Examination Review****3 Credits**

Prerequisites: None. Reviews content of program, emphasizing anatomy, physics, exposure principles, positioning and radiation safety. Simulated exams prepare the student for the American Registry of Radiologic Technologist Examination.

**RES 121 Introduction to Respiratory Care****6 Credits**

Prerequisites: Program Chair approval; demonstrated competency in reading, writing, computation and basic science skills through appropriate assessment or successful completion of BSA program coursework. Corequisites: RES 122 - Therapeutic Modalities. Presents an introduction to respiratory care including a brief history of the profession; equipment cleaning and sterilization techniques; patient assessment techniques and isolation techniques. Includes medical records documentation, gas analyzers, introduction and application of therapeutic modalities including oxygen therapy, aerosol and humidity therapy, airway maintenance, hyperinflation therapy and an overview of ethical practice and safety.

**RES 122 Therapeutic Modalities****3 Credits**

Prerequisites: Program Chair approval; demonstrated competency in reading, writing, computation and basic science skills through appropriate assessment or successful completion of BSA program coursework. Presents medicinal aerosol therapy and respiratory pharmacology; hyperinflation therapies; introduction to pulmonary rehabilitation and home care. Introduces basic bedside pulmonary function testing and development of respiratory care plans. Presents selected aspects of ethical and legal respiratory practice.

**RES 123 Cardiopulmonary Physiology****3 Credits**

Prerequisites: ANP 101 - Anatomy and Physiology I. Corequisites: ANP 102 - Anatomy and Physiology II. Presents the cardiopulmonary system including ventilation, perfusion and gas exchange; introduces interpretation and application of arterial blood gases, acid-base regulation and physiologic monitoring.

**RES 124 Clinical Practicum I****3 Credits**

Prerequisites: CPR Certification - Course C AHA, Health Care Provider (HCP) Level. Corequisites: RES 121 - Introduction to Respiratory Care. Introduces the student to the hospital environment. Exposes the student to various hospitals and respiratory care departments, patient charts, patient identification and communication within the hospital. Provides supervised experience in oxygen therapy, hyperinflation therapy, humidity/aerosol therapy and charting.

**RES 125 Critical Care I****3 Credits**

Prerequisites: RES 122 - Therapeutic Modalities. Introduction to the respiratory care of the critically ill patient. Presents arterial blood gas collection; analysis and interpretation; and basic medical laboratory data. Introduces concepts and techniques of critical respiratory care of adults and pediatrics; includes establishment and maintenance of artificial airways, application of adult and pediatric mechanical ventilators and related cardio-pulmonary monitoring equipment.

**RES 126 Clinical Medicine I****3 Credits**

Prerequisites: RES 123 - Cardiopulmonary Physiology. Introduces etiology, symptomatology, diagnosis, therapeutics and prognosis of selected pulmonary diseases.

**RES 127 Clinical Practicum II****3 Credits**

Prerequisites: RES 121 - Introduction to Respiratory Care, CPR - Certification Course C and RES 124 - Clinical Practicum I. Provides supervised experience in selected therapeutic modalities. Includes an introduction to chest physiotherapy, medicinal aerosol therapy, intermittent positive pressure breathing and ultrasonic therapy. Requires continuing certification in CPR.

**RES 128 Clinical Practicum III****9 Credits**

Prerequisites: RES 125 - Critical Care I, CPR Certification - HCP Level, RES 126 - Clinical Medicine I, RES 127 - Clinical Practicum II. Provides additional supervised experience in selected therapeutic modalities. Includes advanced patient assessment, arterial blood gas analysis and airway care. Provides clinical experience in adult critical care with mechanical ventilation. Includes an introduction to basic cardiopulmonary testing. Requires continued Certification in CPR.

**RES 221 Cardiopulmonary Diagnostics****3 Credits**

Prerequisites: RES 125 - Critical Care I and RES 126 - Clinical Medicine I. Presents in-depth approaches to the respiratory care management of critically ill neonatal, pediatric and adult patients. Emphasizes techniques of patient evaluation, cardiopulmonary monitoring, transportation and management. Includes advanced techniques of patient assessment through pulmonary function testing and other selected assessment techniques.

**RES 222 Critical Care II****3 Credits**

Prerequisites: RES 125 - Critical Care I and RES 126 - Clinical Medicine I. Presents advanced techniques of mechanical ventilation of neonatal, pediatric and adult patients; includes fetal development and assessment; neonatal and pediatric assessment, equipment, procedures and therapeutic techniques; and introduces related aspects of the NICU environment.

**RES 223 Respiratory Pharmacology****3 Credits**

Prerequisites: ANP 101 - Anatomy and Physiology I and ANP 102 - Anatomy and Physiology II. Discusses the most common pharmacological agents currently being administered to all body systems. Emphasizes classifications, indications, side effects, dosages and routes of administration. Discusses emergency drugs, antibacterial medication, antifungal medications, and the implications and complications of IV therapy.

**RES 224 Clinical Medicine II****3 Credits**

Prerequisites: RES 221 - Cardiopulmonary Diagnostics. Presents etiology, symptomatology, diagnosis, therapeutics and prognosis of disease conditions related to respiratory care; focuses on the interrelation of all physiologic systems. Emphasizes treatment protocols and includes preparation for clinical simulation component of national credentialing examination.

**RES 226 Continuing Care****2 Credits**

Corequisites: RES 227 - Clinical Practicum IV. Presents a brief history of home care patients in relation to respiratory care modalities. Provides an overview of respiratory care roles in the alternative care sites.

**RES 227 Clinical Practicum IV****6 Credits**

Prerequisites: CPR Certification - Course C and RES 128 - Clinical Practicum III. Provides additional supervised experience in selected therapeutic modalities. Includes advanced cardiopulmonary diagnostic techniques, application of invasive and non-invasive monitoring of the cardiopulmonary system and experience in respiratory care, departmental management and quality assurance roles. Includes advanced clinical experience in adult, pediatric and neonatal critical care. Requires continuing certification in CPR.

**RES 229 Emergency Management****2 Credits**

Prerequisites: CPR Certification - HPC Level. Applies advanced cardiopulmonary life support efforts in an emergency setting.

**RTV 101 Introduction to RV Service/Customer Relations****2 Credits**

Prerequisites: None. Covers the use of basic hand tools and equipment used in the repair of recreational vehicles. Discusses service and safety practices, technician liability, applicable laws, service documentation and manuals. Examines RV classifications, industrial codes and standards. Covers techniques, insights and pertinent knowledge needed to foster positive relationships with customers as well as situations and remedies for dealing with dissatisfied customers.

**RTV 102 Electrical Concepts****3 Credits**

Prerequisites: None. Acquaints students with fundamentals of AC/DC electricity and circuitry related to troubleshooting and repair of recreational vehicles. Studies the use of test equipment and identification of component symbols and applies them to actual RV systems and appliances.

**RTV 103 Fluid Power, Heat and Mechanical Systems****4 Credits**

Prerequisites: None. Provides an overview of pneumatic and hydraulic power generation, controls, and actuation devices found in recreational vehicles. Includes an introduction of the basic principles of gears, levers, pulleys and their application to simple machines. Studies the effects and application of heat on solids, liquids and gases.

**RTV 104 LP Gas****2 Credits**

Prerequisites: None. Addresses LP gas fundamentals, properties and safety as used in troubleshooting and repair of RV systems within industry and governmental codes and standards. Encompasses the use of test equipment and identification of component symbols and applies them to actual RV systems and appliances.

**RTV 105 RV Electrical Systems Service****5 Credits**

Prerequisites: RTV 102 - Electrical Concepts. Provides necessary skills and knowledge to troubleshoot, repair and/or replace AC/DC circuitry, components and auxiliary systems in recreational vehicles.

**RTV 106 RV Braking, Suspension, and Towing Systems****3 Credits**

Prerequisites: None. Covers the operation, troubleshooting, repair and/or replacement of electric brakes, suspension and towing systems in all types of recreational vehicles. Studies actual RV systems and appliances. Includes appropriate mathematical formulae.

**RTV 107 RV Air Conditioning and Absorption Refrigeration Service****4 Credits**

Prerequisites: None. Acquaints students with absorption refrigeration principles, troubleshooting, and repair utilizing actual RV systems and appliances. Studies inspection, maintenance and replacement techniques.

**RTV 108 Heating Systems/Accessory Installation and Service****3 Credits**

Prerequisites: None. Covers theory of operation, diagnosis and troubleshooting of heating systems and accessories.

**RVT 109 Water Systems and Water Heating****2 Credits**

Prerequisites: None. Covers theory of operation, diagnosis and troubleshooting of water systems and water heaters.

**RVT 110 Interior Coach****3 Credits**

Prerequisites: None. Deals with installation, troubleshooting, repair and/or replacement of interior cabinetry, furniture, hardware, paneling, ceilings, flooring, floor coverings, upholstery, soft goods, doors and other interior components. Demonstrates and applies basic skills related to working with wood, plastics and fabrics.

**RVT 111 Exterior Coach****4 Credits**

Prerequisites: None. Details structural characteristics of various types of recreational vehicles. Provides skills and knowledge necessary to repair, recover and reseal exterior sidewalls and roofs. Demonstrates and applies techniques for locating and repairing water and air leaks, windows, basic body repair, touch-up and painting.

**RVT 112 Pre-Delivery and Preventive Maintenance****2 Credits**

Prerequisites: None. Provides techniques and procedures to ensure proper pre-delivery preparation for new units. Covers inspection, periodic checks and adjustments and fluid, filter and belt replacements. Utilizes actual vehicles and components.

**RVT 201 Metal Processing and Metallurgy****2 Credits**

Prerequisites: None. Covers applications of welding and the study of metals utilized in the RV service industry. Discusses and applies the use of sheet metal tools, layout, cutting, forming and fastening.

**RVT 220 Recreational Vehicle Retailing****3 Credits**

Prerequisites: None. Provides techniques and procedures that will promote retailing experience for sales staff in the recreational vehicle dealership. The sales techniques will focus on the total vehicle and its systems, with promotion of each system to complete the sale.

**RVT 280 Co-op/Internship****1-6 Credits**

Prerequisites: Provides the opportunity to work at a job site specifically related to a student's career objectives. Provides on-the-job experience while earning credit toward an associate degree.

**SPC 102 Introduction to Non-Destructive Testing****3 Credits**

Prerequisites: None. Acquaints students with the principles and various types of non-destructive examination methods, their advantages, limitations and applications.

**SPC 103 Employee Participation Techniques and Quality Improvements****3 Credits**

Prerequisites: None. Provides an overview of the development of an employee involvement program such as quality circles, teams, groups and other concepts. Includes problem-solving techniques of brainstorming, cause and effect diagrams, data gathering, check sheets, Pareto analysis, central location, frequency distribution and histograms. Covers the role of management and employees in the process and their relationship to participative management.

**SPC 105 Non-Destructive Testing Applications I****3 Credits**

Prerequisites: QSC 101 - Quality Control Concepts and Techniques I. Presents an overview of the relationship of non-destructive testing to the total quality function. Includes advantages and limitations of various test methods.

**SPC 106 Non-Destructive Testing Applications II****3 Credits**

Prerequisites: SPC 105 - Non-Destructive Testing Applications I. Covers theoretical and practical aspects of non-destructive testing in radiography, eddy current testing, acoustic emission and leak testing.

**SPC 111 Reliability Objectives****3 Credits**

Prerequisites: QSC 101 - Quality Control Concepts and Techniques I, QSC 202 - Quality Control Concepts and Techniques II. Introduces the development and principles of reliability engineering. Establishes the mathematical and physical bases of reliability and applies the basic elements of reliability data analysis. Surveys concepts basic to modern reliability requirements with emphasis on practical applications in manufacturing processes and production operations.

**SPC 204 Statistical Concepts and Techniques****3 Credits**

Prerequisites: MAT 115 - Statistics. Presents various topics pertaining to statistical applications of quality control including frequency distribution, probability theory and application, and sampling techniques.

**SUR 111 Fundamentals of Surgical Technology****4 Credits**

Prerequisites: Admission to clinical phase of Surgical program. Corequisites: SUR 112 - Application of Surgical Fundamentals. Introduces principles of sterile techniques and the operative care of the surgical patient. Includes the roles of scrubbing and circulating duties.

**SUR 112 Application of Surgical Fundamentals****2 Credits**

Prerequisites: Admission to clinical phase of Surgical program. Corequisites: SUR 111 - Fundamentals of Surgical Technology. Demonstrates the application of surgical fundamentals. Correlates theory to practice by requiring students to participate as members of a surgical team in laboratory simulations.

**SUR 113 Surgical Procedures I****3 Credits**

Prerequisites: SUR 111 - Fundamentals of Surgical Technology, SUR 112 - Application of Surgical Fundamentals. Corequisites: SUR 114 - Clinical Applications I. Introduces general surgical procedures with review of perioperative patient care including diagnostic testing, pre-operative care and immediate post-operative care.

**SUR 114 Clinical Applications I****3 Credits**

Prerequisites: SUR 111 - Fundamentals of Surgical Technology, SUR 112 - Application of Surgical Fundamentals. Corequisites: SUR 113 - Surgical Procedures I. Correlates the principles and theories of basic surgical procedures to clinical performance in affiliating hospitals. Includes knowledge, skills and attitudes necessary for successful implementation of safe patient care in an operating room.

**SUR 211 Surgical Procedures II****6 Credits**

Prerequisites: SUR 113 - Surgical Procedures I, SUR 114 - Clinical Applications I. Corequisites: SUR 212 - Clinical Applications II. Studies advanced surgical procedures in relation to the physiological aspects of surgical intervention including those procedures related to the special senses, genitourinary, musculoskeletal and nervous systems. Includes a knowledge of the involved anatomy, existing pathology, surgical hazards encountered, the surgical procedure and a review of perioperative patient care.

**SUR 212 Clinical Applications II****9 Credits**

Prerequisites: SUR 113 - Surgical Procedures I, SUR 114 - Clinical Applications I. Corequisites: SUR 211 - Surgical Procedures II. Correlates the basic principles and theories of advanced surgical procedures to clinical performance in affiliating hospitals. Includes knowledge, skills and attitudes necessary for successful implementation of safe patient care in an operating room.

**SUR 213 Surgical Procedures III****3 Credits**

Prerequisites: SUR 211 Surgical Procedures II, SUR 212 Clinical Applications II. Corequisites: SUR 214 - Clinical Applications III. Studies specialized surgical procedures including those related to the cardiothoracic and vascular systems. Includes a knowledge of the involved anatomy, existing pathology, surgical hazards encountered, the surgical procedure and a review of perioperative patient care.

**SUR 214 Clinical Applications III****8 Credits**

Prerequisites: SUR 211 - Surgical Procedures II, SUR 212 - Clinical Applications II. Corequisites: SUR 213 - Surgical Procedures III. Correlates principles and theories of specialized surgical procedures to the clinical performance in affiliating hospitals. Includes the knowledge, skills and attitudes necessary for successful implementation of safe patient care in an operating room.

**TEC 102 Technical Graphics****3 Credits**

Prerequisites: None. Strengthens basic drafting skills to a proficient, technician level. Includes orthographic projections with auxiliary views, dimensioning, sectioning and introductory tolerancing. Studies isometric and oblique views of parts.

**TEC 103 Collaborative Team Skills****1 Credit**

Corequisites or Prerequisites: PSY 101 - Introduction to Psychology or SOC 111 - Introduction to Sociology or consent of instructor. Introduces students to effective communication skills, conflict resolution, team collaboration and decision making.

**TEC 104 Computer Fundamentals for Technology****3 Credits**

Corequisites: MAT 050 - Basic Algebra. Provides an introduction to microcomputer hardware, applications, and software. Emphasizes computer literacy, the Windows operating system, computer programming, and industrial orientation. Surveys commonly used microcomputer applications.

**TEC 106 Hazardous Materials and Control****3 Credits**

Prerequisites: None. Introduces hazardous materials, managing hazardous material incidents, explosive and gas emergencies, shipping containers, cylinder safety devices, responding to flammable and combustible liquids, oxidizers, poisons and corrosives, and radioactive emergencies. Emphasizes chemical identification, marking, storage, shipping and handling hazardous substances. Uses basic monitoring instruments for hazardous areas to protect workers and first responders. Covers protective clothing and equipment. Emphasizes safety procedures and practices.

**TEC 113 Basic Electricity****3 Credits**

Corequisites: MAT 050 - Basic Algebra or demonstrated competency or program advisor approval. Studies electrical laws and principles pertaining to DC and AC circuits. Includes current, voltage, resistance, power, inductance, capacitance and transformers. Stresses the use of standard electrical tests, electrical equipment and troubleshooting procedures. Safety procedures and practices are emphasized.

**VID 101 Audio/Video Systems Theory****3 Credits**

Prerequisites: None. Examines cinematic convention, visual literacy and sound aesthetics. Includes viewing of films and video, class discussion and field trips.

**VID 102 Media Technology****3 Credits**

Prerequisites: None. Provides a skills-based introduction to broadcast production. Includes hands-on experience in production technique.

**VID 104 Studio I****3 Credits**

Prerequisites: None. Develops the skills required to set up and operate AV studio equipment. Students select equipment for specific applications and make recordings using audio and video signal processing devices. Emphasis is placed on audio.

**VID 106 Production Planning****3 Credits**

Prerequisites: None. Students plan audio and video productions which meet specific needs in a given group. Emphasizes instructional design, flow, continuity and application of visual design principles. Project work includes preliminary planning, scripting and storyboard production.

**VID 107 Video Production II****3 Credits**

Prerequisites: VIS 105 - Video and Sound (or equivalent experience). Focuses on the skills needed to perform as a grip or videographer on location. Emphasizes lighting, audio and electronic news gathering skills.

**VID 109 Studio II****3 Credits**

Prerequisites: None. Requires project work in studio post production. Students use audio and video equipment to "sweeten" recordings, produce special effects and create animated or graphic segments. Emphasizes coordination of audio and visual aspects.

**VID 110 Studio III****3 Credits**

Prerequisites: None. Explores the disciplines and techniques of television studio production by alternately fulfilling the role of director, camera operator, technical director, floor director and engineer. Project work includes video system design and analysis.

**VID 202 Video Production III****3 Credits**

Prerequisites: None. Focuses on the role of the video producer as a manager of time-based information. Students learn through experiential project work in client relations, budgeting, contracts, media law and scheduling.

**VID 204 Special Projects I****3 Credits**

Prerequisites: None. Accommodates student interest in specific interest areas. Requires performance and completed work to be portfolio quality and reflect applicability to the main areas of student program.

**VID 206 Independent Study I****3 Credits**

Prerequisites: None. Provides the opportunity to design a project for a specific program area. Includes development of project plan and expected outcomes. Restricts work to student program area and must be portfolio quality.

**VID 207 Independent Study II****3 Credits**

Prerequisites: All Communications courses. Corequisites: All required program courses. Focuses on the student's final preparation for the job interview. Finalizes project work demonstrating acquired knowledge and skills, along with résumé and cover letter, for presentation to prospective employers. Provides students with the opportunity to use one credit for field study.

**VID 280 Co-op/Internship****1-6 Credits**

Prerequisites: None. Provides students with the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

**VID 281-294 Special Topics in Video Technology****1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

**3 Credits****VIS 101 Fundamentals of Design**

Prerequisites: None. Investigates design theory and color dynamics as applied to organizing the visual field. Provides experiences in applying design theory.

**3 Credits****VIS 102 Fundamentals of Imaging**

Prerequisites: VIS 115 - Computer Graphics and VIS 101 - Fundamentals of Design. Introduces students to a full range of image input technology including conventional 35mm photography, still video capture, video camcorder and computer scanners.

**3 Credits****VIS 103 Introduction to Multi-Media**

Prerequisites: Advanced standing with Advisor approval. Explores various software programs involved in creating multi-media presentations, digital movies, digital animation and analog video output.

**3 Credits****VIS 105 Video and Sound**

Prerequisites: None. Provides a comprehensive survey course in video production including an introduction to planning, shooting and editing video projects.

**3 Credits****VIS 115 Computer Graphics**

Prerequisites: None. Introduces students to the computer's use in graphic design. Focuses on basic computer terminology and use, mastering fundamental skills and developing efficient working styles. Develops skills by creating publications with page layout software.

**3 Credits****VIS 201 Electronic Imaging**

Prerequisites: VIS 115 - Computer Graphics. Examines the area of still video photography and various electronic darkroom software packages. Provides experience with the electronic darkroom environment including editing processes, manipulation of images in black and white and color, and working with various output devices. Discusses four-color separations and pre-press procedures.

**3 Credits****VIS 202 Color Prepress**

Prerequisites: VIS 201 - Electronic Imaging. Examines the technical specifications, translation issues, various output options and troubleshooting of graphic files for high end printing processes. Studies and compares the roles of electronic production artists, of service bureaus and of printing technologies.

**3 Credits****VIS 205 Business Practices for Visual Artists**

Prerequisites: ART 217 - Advanced Graphic Design. Examines legal and business issues affecting the professional visual artist. Examines copyright and "work for hire", marketing and self-promotion, estimating and pricing, insurance and liability, and the computer's role in managing a business.

**3 Credits****VIS 206 Interdisciplinary Studies**

Prerequisites: None. Offers students opportunities to complete selected projects while working in a team environment with students of other disciplines. Simulates situations found in industry.

**3 Credits****VIS 207 Portfolio Preparation**

Prerequisites: All Communications courses. Corequisites: All required program courses. Focuses on student's final preparation for the job interview. Finalizes project work demonstrating acquired knowledge and skills, along with resume and cover letter, for presentation to prospective employers. Provides students with the opportunity to use one credit for field study.

**3 Credits****VIS 208 Portfolio Preparation II**

Prerequisites: VIS 207 - Portfolio Preparation. Provides the opportunity to design a portfolio that focuses on a second specialty area (or additional or updated skill area). Project work is finalized for presentation to prospective employers or industry review. (Restricts work to student specialty area or new skill area and must be portfolio quality.) Allows student to integrate skills between specialties for a revised, extended or additional portfolio.

**3 Credits****VIS 209 3D Rendering and Animation**

Prerequisites: None. Examines the virtual world of 3D and how it can be applied as an illustration and animation element in multimedia. Students will explore navigation, modeling, rendering, animation, and camera and lighting techniques.

**1-5 Credits****VIS 281-294 Special Topics in Visual Communications Technology**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area (Contact chief academic officer for more information).

**WLD 100 Welding Processes****3 Credits**

Prerequisites: None. Provides general study of oxy-fuel, shielded metal arc, gas tungsten arc, gas metal arc, submerged arc, plasma arc, resistance, flash and upset, friction, electron beam and laser welding processes. Covers equipment, techniques, electrodes, fuel gases and/or shielding gases, weld joint design, advantages and limitations, process applications, process variables and operational costs.

**WLD 101 Gas Welding I****3 Credits**

Prerequisites: None. Introduces basic oxy-acetylene brazing. Involves detailed study of the techniques of making welds in flat positions. Includes gas brazing. Provides additional background essential to a qualified welder.

**WLD 103 Arc Welding I****3 Credits**

Prerequisites: None. Covers the welding of ferrous metals and alloys utilizing metallic manual arc welding methods. Includes procedures in joint design using "T" joint, lap joint and butt joint designs. Covers single pass and multi-pass techniques. Emphasizes safety hazards and safe practices in arc welding.

**WLD 105 Welding Equipment and Electrical Maintenance****3 Credits**

Prerequisites: None. Focuses on the design of oxy-fuel welding and cutting equipment and electric arc welding and cutting equipment. Enables students to perform troubleshooting on the equipment and apply proper maintenance. Examines relationships of voltage, current and resistance on electrical circuits with emphasis on the production of heat from the flow of electric current through resistance.

**WLD 107 Welding Troubleshooting****3 Credits**

Prerequisites: None. Covers evaluation of weldments, welding procedures and tolerances, and joint design and alignment.

**WLD 108 Shielded Metal Arc Welding I****3 Credits**

Prerequisites: None. Provides students with knowledge of shielded metal arc welding operations and equipment. Provides extensive practice time to produce the skills to make satisfactory welds with this process. Emphasizes safety hazards and safety practices in arc welding.

**WLD 109 Oxy-Acetylene Gas Welding and Cutting****3 Credits**

Prerequisites: None. Offers basic instruction in oxy-acetylene welding with emphasis on welding techniques in flat, horizontal, vertical and overhead positions. Includes brazing and flame cutting. Focuses on safety hazards and safe practices in oxy-acetylene welding and cutting.

**WLD 110 Welding Fabrication I****3 Credits**

Prerequisites: WLD 108 - Shielded Metal Arc Welding I, WLD 109 - Oxy-Acetylene Gas Welding and Cutting, WLD 207 - Gas Metal Arc (MIG) Welding. Provides opportunities for practice in hands-on fabrication of welded products. Includes basic equipment used in fabrication.

**WLD 115 Shop Practices I****3 Credits**

Prerequisites: None. Provides use of shop to practice various types of welding to improve operator skill.

**WLD 116 Shop Practices II****3 Credits**

Prerequisites: WLD 115 - Shop Practices I. Continues open use of shop to practice various types of welding to improve operator skills.

**WLD 117 Shop Practices III****3 Credits**

Prerequisites: WLD 116 - Shop Practices II. Continues open use of shop to practice various types of welding to improve operator skills.

**WLD 120 Metallurgy Fundamentals****3 Credits**

Prerequisites: None. Studies properties and uses of ferrous and nonferrous metals and alloys, production of iron and steel, composition and properties of plain carbon steel and alloying elements, selection of tools, case hardening and destructive and nondestructive testing. Includes fundamentals of heat treatment and reactions occurring in metals subjected to various heat treatment methods and techniques.

**WLD 201 Special Welding Processes****3 Credits**

Prerequisites: Advisor approval. Welding practice with various welding processes and techniques using advanced welding methods, machines and equipment. Presents advanced arc welding with emphasis on use and orientation of submerged arc welding equipment.

**WLD 202 Arc Welding II****3 Credits**

Prerequisites: WLD 103 - Arc Welding I. Offers instruction in electrode selections, weld techniques, power supplies and current characteristics in preparation for test.

**WLD 203 Pipe Welding I****3 Credits**

Prerequisites: WLD 108 - Shielded Metal Arc Welding I, WLD 206 - Shielded Metal Arc Welding II. Provides for extensive practice in the preparation and welding of pipe in the 2G and 5G position. Includes preparation, methods of welding, electrodes and filler wires.

**WLD 204 Pipe Welding II****3 Credits**

Prerequisites: WLD 203 - Pipe Welding I. Provides extensive training in the preparation and welding of pipe in the 5G and 6G position. Includes information on preparation, method of welding, and electrodes and filler wires.

**WLD 205 Welding Codes, Specifications and Estimating****3 Credits**

Prerequisites: Advisor approval. Provides students with different types of welding codes and testing operations. Covers procedures, specifications and information about filler materials, positions, post-heat and pre-heat treatment, backing strips, preparations of parent metals, cleaning and defects. Includes AWS and ASME code.

**WLD 206 Shielded Metal Arc Welding II****3 Credits**

Prerequisites: WLD 108 - Shielded Metal Arc Welding I. Covers SMAW welding equipment and products used to produce groove type butt welds. Provides extensive practice to develop the skills to achieve satisfactory welds of this type. Safety hazards and safe practices in arc welding are emphasized.

**WLD 207 Gas Metal Arc (MIG) Welding****3 Credits**

Prerequisites: None. Considers various gas metal arc welding (GMAW) processes including microwire, flux-core, innershield and submerged arc with emphasis on metal inert gas welding. Includes techniques of welding in all positions on various thicknesses of metal.

**WLD 208 Gas Tungsten Arc (TIG) Welding****3 Credits**

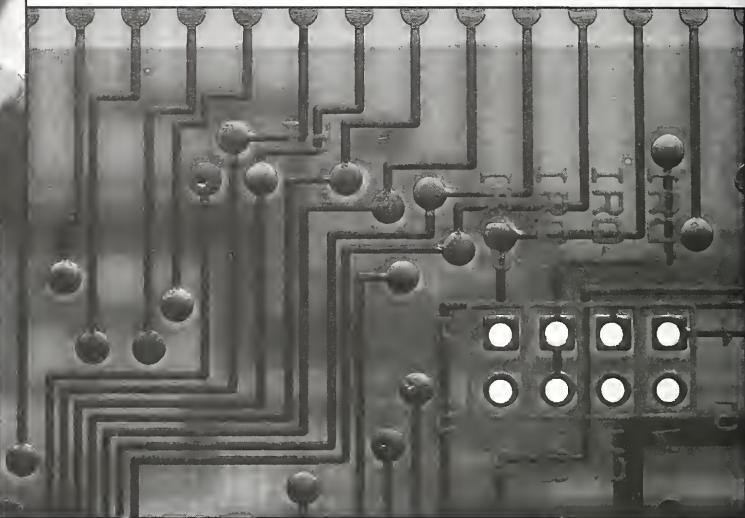
Prerequisites: WLD 109 - Oxy-Acetylene Gas Welding and Cutting. Provides students with thorough knowledge of the gas tungsten arc welding process. Includes detailed study of the techniques of making welds in all positions using the GTAW applications. Lectures and discussions provide additional background information essential to a qualified GTAW welder.

**WLD 209 Welding Certification****3 Credits**

Prerequisites: Program chair approval. Prepares the student for certification in shielded arc, TIG and MIG welding through study of the qualifications, procedures and equipment standards. Includes a survey of qualifying agencies, associations and societies.

**WLD 210 Welding Fabrication II****3 Credits**

Prerequisites: WLD 110 - Welding Fabrication I. Provides for practice in hands-on fabrication and the use of related equipment.



# Program Availability

Ivy Tech State College offers many educational programs. Not all programs are offered at all campuses, however, and the degrees available within a program may vary from campus to campus.

Use this section to find out what programs and degrees are available at the campus that interests you.



# Program Availability

## Anderson Campus

Associate of Applied Science  
Accounting  
Office Administration  
Business Administration  
Computer Information Systems  
Electronics Technology  
Industrial Technology  
Medical Assistant

Technical Certificate  
Accounting  
Office Administration  
Computer Information Systems  
General Technical Studies  
Industrial Technology  
Medical Assistant  
Practical Nursing

Associate of Science  
Business Administration  
Electronics Technology

## Bloomington Campus

Associate of Applied Science  
Accounting  
Computer Information Systems  
Design Technology  
Electronics Technology  
Industrial Technology  
Office Administration

Technical Certificate  
General Technical Studies  
Industrial Technology  
Office Administration  
Practical Nursing

Associate of Science  
Assoc of Science in Nursing  
Business Administration  
Design Technology  
Electronics Technology

## Columbus Campus

Associate of Applied Science  
Accounting  
Office Administration  
Automotive Technology  
Business Administration  
Early Childhood Education  
Computer Information Systems  
Design Technology  
Electronics Technology  
Industrial Technology  
Manufacturing Technology  
Medical Assistant  
Radiologic Technology  
Surgical Technology  
Visual Communications

Technical Certificate  
Accounting  
Early Childhood Education  
General Technical Studies  
Industrial Technology  
Medical Assistant  
Office Administration  
Practical Nursing

Associate of Science  
Accounting  
Business Administration  
Computer Information Systems  
Design Technology  
Electronics Technology

## East Chicago Campus

Associate of Applied Science  
Accounting  
Office Administration  
Automotive Technology  
Computer Information Systems  
Construction Technology  
Design Technology  
Electronics Technology  
Hospitality Administration  
Industrial Technology

Technical Certificate  
Automotive Technology  
Computer Information Systems  
Construction Technology  
Design Technology  
General Technical Studies  
Hospitality Administration  
Industrial Technology  
Office Administration

Associate of Science  
Design Technology  
Electronics Technology

## Elkhart Campus

Associate of Applied Science	Technical Certificate
Accounting	Business Administration
Business Administration	Computer Information Systems
Computer Information Systems	General Technical Studies
Design Technology	Industrial Technology
Electronics Technology	Medical Assistant
Industrial Technology	Office Administration
Medical Assistant	Practical Nursing
Office Administration	Recreational Vehicle Repair Tech
Recreational Vehicle Repair Tech	

Associate of Science
Accounting
Business Administration
Design Technology
Electronics Technology

## Evansville Campus

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Assoc of Science in Nursing
Automotive Technology	Automotive Technology	Business Administration
Business Administration	Early Childhood Education	Computer Information Systems
Early Childhood Education	General Technical Studies	Design Technology
Computer Information Systems	Industrial Technology	Electronics Technology
Design Technology	Medical Assistant	Visual Communications
Electronics Technology	Office Administration	
Industrial Technology	Practical Nursing	
Interior Design		
Manufacturing Technology		
Medical Assistant		
Office Administration		
Paramedic Science		
Surgical Technology		
Visual Communications		
Early Childhood Education		

## Fort Wayne Campus

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Business Administration
Office Administration	Business Administration	Early Childhood Education
Automotive Technology	Early Childhood Education	Design Technology
Business Administration	Computer Information Systems	Electronics Technology
Early Childhood Education	Construction Technology	Human Services
Computer Information Systems	Design Technology	Paralegal
Construction Technology	General Technical Studies	Physical Therapist Assistant
Design Technology	Hospitality Administration	
Electronics Technology	Human Services	
Hospitality Administration	Industrial Technology	
Human Services	Medical Assistant	
Industrial Technology	Office Administration	
Manufacturing Technology	Practical Nursing	
Medical Assistant		
Public Safety		
Respiratory Care		

## Gary Campus

### Associate of Applied Science

Accounting  
Business Administration  
Computer Information Systems  
Early Childhood Education  
Design Technology  
Electronics Technology  
Hospitality Administration  
Industrial Technology  
Office Administration  
Public Safety

### Technical Certificate

Business Administration  
Computer Information Systems  
Early Childhood Education  
Design Technology  
General Technical Studies  
Hospitality Administration  
Industrial Technology  
Office Administration  
Practical Nursing

### Associate of Science

Assoc of Science in Nursing  
Business Administration  
Computer Information Systems  
Design Technology  
Electronics Technology  
Office Administration  
Physical Therapist Assistant

## Indianapolis Campus

### Associate of Applied Science

Accounting  
Automotive Technology  
Business Administration  
Computer Information Systems  
Design Technology  
Electronics Technology  
Hospitality Administration  
Human Services  
Industrial Technology  
Machine Tool Technology  
Medical Assistant  
Office Administration  
Paralegal  
Public Safety  
Radiologic Technology  
Respiratory Care  
Surgical Technology  
Visual Communications

### Technical Certificate

Early Childhood Education  
Design Technology  
General Technical Studies  
Industrial Technology  
Medical Assistant  
Office Administration  
Practical Nursing

### Associate of Science

Accounting  
Assoc of Science in Nursing  
Business Administration  
Early Childhood Education  
Design Technology  
Electronics Technology  
Human Services  
Occupat. Therapy Assisting  
Office Administration

## Kokomo Campus

**Associate of Applied Science**  
Accounting  
Automotive Technology  
Business Administration  
Computer Information Systems  
Design Technology  
Electronics Technology  
Industrial Technology  
Medical Assistant  
Office Administration  
Paramedic Science

**Technical Certificate**  
Accounting  
Computer Information Systems  
Construction Technology  
Design Technology  
General Technical Studies  
Industrial Technology  
Medical Assistant  
Office Administration  
Practical Nursing

**Associate of Science**  
Accounting  
Business Administration  
Computer Information Systems  
Design Technology  
Electronics Technology

**Associate of Applied Science**  
Accounting  
Automotive Technology  
Business Administration  
Early Childhood Education  
Computer Information Systems  
Design Technology  
Electronics  
Industrial Technology  
Manufacturing  
Medical Assistant  
Office Administration  
Quality Science  
Surgical Technology

**Technical Certificate**  
Automotive Technology  
Early Childhood Education  
Dental Assistant  
Design Technology  
General Technical Studies  
Industrial Technology  
Manufacturing  
Medical Assistant  
Office Administration  
Practical Nursing

**Associate of Science**  
Accounting  
Associate of Science in Nursing  
Business Administration  
Computer Information Systems  
Design Technology  
Electronics  
Respiratory Care

## Lawrenceburg Campus

**Associate of Applied Science**  
Accounting  
Business Administration  
Computer Information Systems  
Office Administration

**Technical Certificate**  
Accounting  
Business Administration  
General Technical Studies  
Industrial Technology  
Office Administration

**Associate of Science**  
Accounting  
Business Administration  
Computer Information Systems

**Associate of Applied Science**  
Early Childhood Education  
Computer Information Systems  
Industrial Technology  
Office Administration

**Technical Certificate**  
Accounting  
Computer Information Systems  
General Technical Studies  
Industrial Technology  
Office Administration

**Associate of Science**  
Computer Information Systems  
Office Administration

## Logansport Campus

**Associate of Applied Science**  
Early Childhood Education  
Computer Information Systems  
Industrial Technology  
Office Administration

**Technical Certificate**  
Accounting  
Computer Information Systems  
General Technical Studies  
Industrial Technology  
Office Administration

**Associate of Science**  
Computer Information Systems  
Office Administration

## **Madison Campus**

**Associate of Applied Science**  
Accounting  
Business Administration  
Computer Information Systems  
Electronics Technology  
Industrial Technology  
Manufacturing Technology  
Office Administration

**Technical Certificate**  
Accounting  
Business Administration  
Computer Information Systems  
General Technical Studies  
Human Services  
Industrial Technology  
Medical Assistant  
Office Administration  
Practical Nursing

**Associate of Science**  
Associate of Science in Nursing  
Business Administration  
Electronics Technology

**Associate of Applied Science**  
Accounting  
Business Administration  
Computer Information Systems  
Electronics Technology  
Medical Assistant  
Office Administration  
Radiologic Technology

**Technical Certificate**  
Computer Information Systems  
General Technical Studies  
Medical Assistant

**Associate of Science**  
Business Administration  
Electronics Technology

## **Michigan City Campus**

**Associate of Applied Science**  
Business Administration  
Hospitality Administration  
Medical Assistant  
Respiratory Care  
Surgical Technology

**Technical Certificate**  
Medical Assistant  
Respiratory Care

**Associate of Science**  
Business Administration  
Electronics Technology

**Associate of Applied Science**  
Accounting  
Automotive Technology  
Business Administration  
Early Childhood Education  
Computer Information Systems  
Construction Technology  
Design Technology  
Electronics Technology  
Human Services  
Industrial Technology  
Manufacturing Technology  
Medical Assistant  
Office Administration  
Paralegal  
Surgical Technology

**Technical Certificate**  
Automotive Technology  
Business Administration  
Computer Information Systems  
Construction Technology  
General Technical Studies  
Industrial Technology  
Medical Assistant  
Office Administration  
Practical Nursing

**Associate of Science**  
Associate of Science in Nursing  
Business Administration  
Computer Information Systems  
Design Technology  
Electronics Technology  
Human Services  
Paralegal  
Physical Therapist Assistant

## **Muncie Campus**

**Associate of Applied Science**  
Accounting  
Automotive Technology  
Business Administration  
Early Childhood Education  
Computer Information Systems  
Construction Technology  
Design Technology  
Electronics Technology  
Human Services  
Industrial Technology  
Manufacturing Technology  
Medical Assistant  
Office Administration  
Paralegal  
Surgical Technology

**Technical Certificate**  
Automotive Technology  
Business Administration  
Computer Information Systems  
Construction Technology  
General Technical Studies  
Industrial Technology  
Medical Assistant  
Office Administration  
Practical Nursing

**Associate of Science**  
Associate of Science in Nursing  
Business Administration  
Computer Information Systems  
Design Technology  
Electronics Technology  
Human Services  
Paralegal  
Physical Therapist Assistant

## **Richmond Campus**

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Assoc of Science in Nursing
Automotive Technology	Computer Information Systems	Business Administration
Business Administration	Construction Technology	Early Childhood Education
Early Childhood Education	General Technical Studies	Computer Information Systems
Computer Information Systems	Office Administration	Electronics Technology
Construction Technology	Practical Nursing	
Electronics Technology		
Industrial Technology		
Manufacturing Technology		
Medical Assistant		
Office Administration		

## **Sellersburg Campus**

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Assoc of Science in Nursing
Automotive Technology	Automotive Technology	Business Administration
Business Administration	Business Administration	Design Technology
Computer Information Systems	Computer Information Systems	Electronics Technology
Design Technology	Design Technology	Human Services
Electronics Technology	General Technical Studies	
Human Services	Human Services	
Industrial Technology	Industrial Technology	
Manufacturing Technology	Manufacturing Technology	
Medical Assistant	Medical Assistant	
Office Administration	Office Administration	
Visual Communications	Practical Nursing	

## **South Bend Campus**

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Assoc of Science in Nursing
Automotive Technology	Business Administration	Business Administration
Business Administration	Computer Information Systems	Design Technology
Computer Information Systems	General Technical Studies	Electronics Technology
Design Technology	Industrial Technology	Visual Communications
Electronics Technology	Manufacturing Technology	
Hospitality Administration	Medical Assistant	
Industrial Technology	Office Administration	
Interior Design	Practical Nursing	
Manufacturing Technology		
Medical Assistant		
Medical Lab Technician		
Office Administration		
Video Technology		
Visual Communications		

## Terre Haute Campus

Associate of Applied Science  
Accounting  
Automotive Technology  
Aviation Technology  
Business Administration  
Early Childhood Education  
Computer Information Systems  
Design Technology  
Electronics Technology  
Human Services  
Industrial Technology  
Manufacturing  
Medical Assistant  
Medical Lab Technician  
Office Administration  
Paramedic  
Public Safety  
Quality Science  
Radiologic Technology  
Surgical Technology  
Visual Communications

Technical Certificate  
Accounting  
Automotive Technology  
Avionics  
Early Childhood Education  
General Technical Studies  
Industrial Technology  
Medical Assistant  
Office Administration  
Practical Nursing  
Public Safety

Associate of Science  
Business Administration  
Design Technology  
Electronics Technology  
Human Services  
Manufacturing Technology

Associate of Applied Science  
Accounting  
Automotive Technology  
Business Administration  
Computer Information Systems  
Electronics Technology  
Industrial Technology  
Office Administration  
Paralegal

Technical Certificate  
Automotive Technology  
Business Administration  
Computer Information Systems  
Design Technology  
General Technical Studies  
Industrial Technology

Associate of Science  
Business Administration  
Electronics Technology  
Paralegal

## Warsaw Campus

Associate of Applied Science  
Computer Information Systems

Technical Certificate  
Accounting  
Business Administration  
Computer Information Systems  
General Technical Studies  
Office Administration

Associate of Science



# Faculty & Staff



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Diploma, Suburban Hospital; BS, St. Francis; MS, Valparaiso University

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ASE; AAS, Vincennes University; BS, Indiana State University

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ASME, AWS Welding Certification

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BS, Cabrini College; MPA, Indiana University

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BS, Purdue University; MEA, Indiana University

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BS, MS, Indiana University

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BS, Fayetteville State University

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BSN, MSN, Valparaiso University; BS, College of St. Francis; MA, Ball State University; RNC, National Certification Corporation

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AAS, Purdue University; BS, MS, College of St. Francis

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BS, MS, Eastern Illinois University; PhD, University of Illinois

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BA, MS, College of St. Francis

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BA, MA, Valparaiso University

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AS, Paul D. Camp College; BS, Old Dominion University; BS, Valparaiso University

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Technical Certificate, Respiratory Therapy, National Board/Respiratory Care; BA, Calumet College

**LOBDELL, NORMA**, Instructor in Hospitality, Gary

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**LOVE, NANCY L.**, Assistant Professor in Practical Nursing, Gary

AAS, Indiana University; BS, Purdue University

**MILLER, HARRY B.**, Assistant Professor in Industrial Technology, Valparaiso

ASME, AWS Welding Certification

**MORIKIS, ETHEL**, Assistant Professor in Medical Assistant, Program Chair, Michigan City

AS, BS, Indiana University

**MURRELL, JIMMIE L.**, Associate Professor in Automotive Technology, East Chicago

BA, Chicago State University; Certified – The National Institute of Automotive Service Excellence

**NEARY, JAMES H.**, Associate Professor in General Education, Gary

BA, University of Notre Dame; MA, Purdue University

**OBABJULUWA, VICTOR A.**, Assistant Professor in Physical Therapist Assistant, Gary

BA, MEd, PhD, University of Ibadan

**OLSON, KATHY G.**, Assistant Professor in Business Administration, Gary

BA, Tri-State College, MS Ed, Purdue West Lafayette

**PLANK, LORA Y.**, Assistant Professor in Surgical Technology, Program Chair, Michigan City

AAS, Purdue University; Certified Surgical Technologist

**POLLARD, LOUISE E.**, Associate Professor in Basic Skills, Department Chair, Gary

BS, Wayne State University; MRC, Arkansas State University

**REMAR, JOHN M.**, Associate Professor in Business Administration, East Chicago

BGS, Roosevelt University; MS, Chicago State University

**RIDDLE, JARED M.**, Instructor in Basic Skills, East Chicago

BA, Indiana University

**ROMAN, SOCORRO M.**, Professor in Nursing, Department Chair, Gary

AAS, BS, MS, Purdue University

**ROSILLO, LAURA**, Assistant Professor in General Education, East Chicago

BA, Indiana University; MD, IU School of Medicine, Indianapolis

**RUE, GINA M.**, Instructor in Computer Information Systems, Gary

AAS, Ivy Tech State College; BS, Calumet College of St. Joseph

**SARGENT, MARY K.**, Assistant Professor in General Education, Valparaiso

BS, MS, University of Alabama

**SCHOENFELDER, JOHN H.**, Professor in Business Administration, Department Chair, Valparaiso

AAS, Moraine Valley College; BA, MA, Governors State University

**SCOTT, SHARON T.**, Instructor in Medical Assistant, Gary

Certified Laboratory Assistant (ASCP)

**SIDIQUI, MUHAMMAD T.**, Instructor in Hospitality, Gary

AA, San Jacinto College; BA, The University of Texas of the Permian Basin

**SIEWERT, JOHN A.**, Assistant Professor in Automotive Technology, East Chicago

Dupont Certified

**SIKOSKI, ACO**, Instructor in Design Technology, Department Chair, Valparaiso

BA, "Kiril I Metodij" Skopje Macedonia

**STALEVSKA, LIJANA S.**, Instructor in General Education, Valparaiso

BS, University of Skopje

**STEELE, JOHN R.**, Associate Professor in General Education, Gary

BED, MS, Chicago State University; MHA, Governors State University

**STOWERS, BEVERLY A.**, Associate Professor in Office Administration, Valparaiso

BA, Cedarville College; MBA, Indiana Wesleyan University

**WHEELER, SHARI L.**, Instructor in Child Development, Gary

BS, MS, Indiana State University

**WILLIAMS, GOMER**, Assistant Professor in Industrial Technology, Valparaiso

AAS, Ivy Tech State College

**ZERNIK, JOSEPH D.**, Associate Professor in Business Administration, Department Chair, Gary

BS, Calumet College; MS, Purdue University

## REGION 2

### OFFICERS

**CALVIN, VIRGINIA**, Chancellor

BS, Alcorn State University; MA, New Mexico Highlands University; EdD, Texas Women's University

**BATZER, LYN**, Dean of Academic Affairs

BS, Northern Illinois University; MS, Indiana University-South Bend; Ed.D., Western Michigan University

**HATFIELD, CHARLOTTE**, Campus Dean – Elkhart Site

BS, MA, PhD, University of Texas at Austin

**WALGAMUTH, JOANN**, Campus Dean – Warsaw Site

BS, MA, University of Houston

**BROWN, KIM**, Dean of Student Affairs, South Bend

BS, Indiana University South Bend; MBA, Indiana Wesleyan University

## F A C U L T Y

**ADAMCZYK, RICHARD**, Assistant Professor in Manufacturing Technology, South Bend

BS, University of Krakow; Technical Mechanic and Teacher Degree, Pedagogical Technical School, Kielce (Poland)

**ALPINER, MARVIN L.**, Assistant Professor in Computer Information Systems, Program Chair, South Bend

BS, University of Detroit; MS, Boston University; MBA, Indiana University; DDS University of Detroit

**ASLANDIS, GEORGE**, Assistant Professor in Electronics, Program Chair, South Bend

BS, DeVry Institute of Technology; MBA, Indiana Wesleyan University

**BARTELS, BARBARA A.**, Assistant Professor in Office Administration, Warsaw

BS, Ball State University; MS, St. Francis College

**BARTRAM, DAVID**, Assistant Professor in Business Administration, Elkhart

BA, Michigan State University

**BOEMBEKE, ANGELA**, Instructor in Visual Communications, South Bend

BA, Anderson University; MBA, Indiana Wesleyan University

**BOROWSKI, GEORGE J.**, Assistant Professor in Industrial Technology, South Bend

AAS, Ivy Tech State College; BAS, Siena Heights College

**BURTH, GALE R.**, Assistant Professor in Basic Skills, Elkhart

BA, Indiana University-Bloomington; MS, Indiana University-South Bend

**COMEAU, JOHN**, Associate Professor in General Education, South Bend

BA, University of Notre Dame; MS, Indiana University

**CRENSHAW, DOLLY**, Assistant Professor in Practical Nursing, South Bend

AA, South Suburban College; BS, MA, Western Michigan University

**CONLEY, RUTH**, Assistant Professor in Practical Nursing, South Bend

Diploma, Memorial Hospital School of Nursing, BSN, Bethel College

**COTY, MARY**, Assistant Professor in Associate Degree Nursing, South Bend

BSN, Ball State University; MSN, Valparaiso University

**CURRY, DEBORAH**, Assistant Professor in Practical Nursing, South Bend

BSN, Pittsburg State University

**DEPAUL, LOUIS**, Assistant Professor in Accounting, Department Chair, Elkhart

BS, Youngstown State University; MBA, Indiana University

**FREEL, LINDA**, Assistant Professor in Visual Communications, South Bend

BA, Bethel College; MS, Indiana University-South Bend; MFA, University of Notre Dame

**FREYGANG, JIM**, Assistant Professor in Design Technology, South Bend

AAS, Ivy Tech State College; BFA, St. Francis College

**GANNS, RICHARD**, Assistant Professor in Computer Information Systems, South Bend

AAS, Ivy Tech State College; BA, Indiana University

**GARRELLS, MARTHA**, Associate Professor in Medical Assistant, Program Chair, South Bend

BS, Michigan State University; MS, University of Notre Dame

**GERBASICH, KAREN**, Assistant Professor in Practical Nursing, South Bend

BSN, St. Mary's College

**GERDES, EDITH**, Assistant Professor in Practical Nursing, South Bend

ADN, Purdue University; BHCA, St. Joseph's College

**GICK, DESMOND**, Associate Professor in Computer Information Services, South Bend

BS, Purdue University

**HACKEMANN, SANDRA**, Assistant Professor in Basic Skills, Elkhart

BA, Millsaps College; MA George Peabody College

**HARRIS, IMOGENE**, Associate Professor in Business, Division Chair, South Bend

BS, Southern University

**HENKEL, CHUCK**, Associate Professor in Technology, Division Chair, South Bend

BA, Bethel College; MA, EDS, Western Michigan University

**HEYDE, SUSAN**, Assistant Professor in Office Administration, Elkhart

BS, Ferris State University; MA, Ball State University

**HIERS, JUDY**, Assistant Professor in Office Administration, Program Chair, South Bend

AAS, Delta College; BS, Western Michigan University

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**KIRKNER, CAROL**, Associate Professor in Medical Laboratory Technician, Division Chair, South Bend

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**LEDSOME, DANIEL**, Assistant Professor in General Education, South Bend

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**MCULLOUGH, HENRY**, Assistant Professor in Computer Information Systems, Elkhart

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**MEASELL, NANCY**, Assistant Professor in Medical Assistant, South Bend

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TC, Ivy Tech State College

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**VANOSTERUM, CYNTHIA**, Assistant Professor in Accounting, Program Chair, South Bend

BS, MBA, Indiana University-South Bend

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BSN, Ball State; MSN, Indiana University

**WEIS, THOMAS**, Instructor in Visual Communications, South Bend

BA, Indiana University

**WISLER-DIETRICH, DOROTHY**, Assistant Professor in Associate Degree Nursing, South Bend

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## REGION 3

### OFFICERS

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BS, Huntington College; MS, Saint Francis College; MMP Studies, General Electric Co.

**KEEN, MARK A.**, Dean of Academic Affairs, Fort Wayne

AAS, BS, ITT Technical Institute, MS, Indiana Wesleyan University

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### FACULTY

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AS, BS, Indiana University

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RTT, AS, Butler University

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**CAROTHERS, REBECCA S.**, Instructor in Child Development, Program Chair, Fort Wayne

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# REGION 4

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## FACULTY

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BA, Dehli University; M.BA, Xavier University

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DEADMAN, ROBERT, Instructor in Computer Information Systems, Lafayette

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## R E G I O N 5

### O F F I C E R S

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BS, MS Indiana University-Kokomo

**HOCKNEY, DANIEL W.**, Campus Dean, Logansport  
BS, MA, Ball State University

**LEWIS, PAMELA J.**, Dean of Academic Affairs

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**BAILEY, JANICE L.**, Dean of Student Affairs

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### F A C U L T Y

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BS, Ball State University

**HAYES, DAVID**, Assistant Professor in Computer Information Systems, Program Chair, Kokomo  
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## REGION 6

### OFFICERS

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**STOOPS, SHARON**, Associate Professor in General Education and Support Services, Division Chair, Muncie

BS, MAE, Ball State University

**SWAIN, RICHARD**, Assistant Professor in General Education, Anderson

BS, Ball State University; MS, Miami University

**SYLVESTER, JULIA**, Instructor in Surgical Technology, Program Chair, Muncie

AD, Anderson University; BSN, Indiana Wesleyan University

**TORRES, LOUISE**, Instructor in Practical Nursing, Muncie

BSN, Rush University College

**VESPERY, PAUL**, Instructor in Manufacturing Technology, Program Chair, Muncie

AA, Clark State University; BS, Ohio State University

**WARREN, JOHN**, Associate Professor in Health and Human Services, Division Chair, Muncie

BA, Southern Illinois University; MA, Northeast Missouri State University; Ph.D, Indiana University

**WEDGEWORTH, MICHAEL**, Instructor in General Education, Muncie

BS, MA, Ball State University

**WHISLER, VESTA**, Associate Professor in Accelerated Degree Program, Program Chair, Muncie

BS, MAE, Ball State University

**WHITE, NANCY**, Assistant Professor in Nursing, Program Chair, Muncie

BSN, MSN, Ball State University

**WOODWARD, CATHERINE**, Associate Professor in Practical Nursing, Program Chair, Anderson

BSN, Ball State University; MSN, Indiana Wesleyan

## REGION 7

### OFFICERS

**PITTMAN, JEFF**, Chancellor

BS, Western Kentucky University; BS, Indiana University; MS, Indiana State University

**COTTRELL, NORMA**, Dean of Academic Affairs, Terre Haute

BS, MS, Indiana State University

**LEAH BELL**, Dean of Student Affairs, Terre Haute

BS, MS, Indiana State University

**ALSMAN, CATHY**, Instructor in Human Services, Program Chair, Terre Haute

BS, MS, Indiana State University

**ARNEY, DON**, Professor, Division Chair, Terre Haute

BS, MS, Indiana State University

**BARCUS, BECKY**, Assistant Professor in Medical Assistant, Terre Haute

BS, Indiana State University; BS, University of Evansville

**BEHRINGER, DEBRA**, Assistant Professor in Nursing, Terre Haute

BSN, University of Michigan

**BERRISFORD, RICK**, Instructor in Welding, Terre Haute

**BOESEN, MELANIE**, Associate Professor in Office Administration, Terre Haute

BS, MS, Indiana State University

**BOLINGER, BONNIE**, Assistant Professor in Business Administration, Terre Haute

BS, MBA, Indiana State University

**BROWN, MARY**, Assistant Professor in Nursing, Terre Haute

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**BYERS, JOHN**, Associate Professor in Visual Communications, Program Chair, Terre Haute

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**CATON, JANET**, Assistant Professor in Quality Science, Program Chair, Terre Haute

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**CHANAY, MARY**, Associate Professor in Visual Communications, Program Chair, Terre Haute

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**CLEM, LORA**, Instructor in Medical Laboratory Technician, Terre Haute

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**KIM COOPER**, Instructor in Practical Nursing, Program Chair, Terre Haute

BS, AS, Indiana State University

**CRIST, DONALD**, Instructor in Barbering, Terre Haute

**GAMBILL, JANE**, Assistant Professor in Medical Laboratory Technician, Program Chair, Terre Haute

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**GARNER, JOHN**, Assistant Professor in Radiology, Program Chair, Terre Haute

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**HENSON, JOSEPH**, Instructor in Aviation Technology, Terre Haute

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**HOFMANN, BEULAH**, Associate Professor in Medical Assistant, Program Chair, Terre Haute

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**JONES, CHARLES**, Assistant Instructor in Industrial Technology, Terre Haute

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**JONES, ROBERT**, Assistant Professor in General Education, Terre Haute

BS, Purdue University

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**KING, DEANNA**, Assistant Professor in Accounting, Division Chair, Terre Haute  
BS, Indiana University; MBA, Indiana State University

**KIRBY, BRYAN**, Assistant Professor in General Education, Terre Haute

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**KREICKER, CYNTHIA**, Instructor in Practical Nursing, Terre Haute

BS, Indiana Wesleyan

**LAFFERY, CHRISTINA**, Instructor in Practical Nursing, Terre Haute

AS, Vincennes University; BS, Indiana Wesleyan

**LAWSON, JAMES**, Assistant Professor in Industrial Technology, Terre Haute

BS, Indiana State University

**LINNEWEBER, JAMES**, Instructor in Accounting, Terre Haute

BS, Indiana State University

**LUMSDON, DONALD R.**, Assistant Professor in Automotive Technology, Program Chair, Terre Haute

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**McKIRAHAN, JAMES**, Instructor in Industrial Technology, Terre Haute

BS, MS, Eastern Illinois University

**MOORE, THOMAS**, Instructor in Automotive Technology, Terre Haute

**MURRAY, ROBERT**, Associate Professor in Computer Information Services, Program Chair, Terre Haute

BA, MS, Butler University

**PAGE-BLACK, KAREN**, Instructor in Visual Communications, Terre Haute

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**RAOTKE, JAMES**, Assistant Professor in Aviation Technology Program Chair, Terre Haute

BS, Ball State University

**RASLEY, JAMES**, Assistant Professor in Computer Information Services, Terre Haute

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**REED, REGINA**, Assistant Professor in Practical Nursing, Greencastle

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**SCHROEDER, KENNETH**, Assistant Professor in Computer Information Services, Terre Haute

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**SHOTWELL, ROBERT**, Associate Professor in General Education, Terre Haute

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**SLYH, KATHLEEN**, Assistant Professor in Practical Nursing, Terre Haute

BSN, University of Cincinnati

**SMITH, MARGIE**, Assistant Professor in Practical Nursing, Greencastle

BSN, Evansville College

**STROLE, KAREN**, Assistant Professor in Practical Nursing, Terre Haute

BS, Indiana State University

**STULTZ, LESLIE**, Associate Professor in General Education, Program Chair, Terre Haute

BS, MS, Indiana State University

**SUMMERS, PAT**, Assistant Professor in General Education, Terre Haute

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**WEBSTER, JANICE**, Associate Professor in Quality Science, Terre Haute

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**WHITE, LUCY**, Assistant Professor in Practical Nursing, Program Chair, Greencastle

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**WILLIAMS, CHAO**, Instructor in Aviation Technology, Terre Haute

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## REGION 8

### OFFICERS

**CARTER, MEREDITH L.**, Vice President/Chancellor

BS, MS, PhD, Ball State University

**HINE, ROSALIE**, Dean of Academic Affairs, Indianapolis

BS, MS, EdD, Ball State University

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<b>BOLINGER, THOMAS</b> , Assistant Professor in Business Administration, Indianapolis BA, Butler University; MBA, Indiana University	<b>HALL, MICHAEL C.</b> , Assistant Professor in Computer Information Systems, Indianapolis BS, MS, Purdue University
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<b>CLIPPINGER, W. MICHAEL</b> , Associate Professor in General Education, Division Chair, Indianapolis BA, MA, Indiana University	<b>HAVER, WANDA L.</b> , Assistant Professor in Surgical Technology, Program Chair, Indianapolis BS, Martin University
<b>COLLINS, EDITH</b> , Assistant Professor in Nursing, Indianapolis BS, MS, PhD, Indiana University; MS, Radford University	<b>HAWKINS, STEVE</b> , Instructor in Machine Tool Technology, Indianapolis AS, Vincennes University; BS, Purdue University
<b>DALZELL, JANE</b> , Assistant Professor in General Technical Studies, Program Chair, Indianapolis BA, University of Indianapolis; MS, Butler University	<b>HAYES, AMY SORRELL</b> , Assistant Professor in Practical Nursing, Indianapolis ASN, BSN, Indiana University
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<b>DEBOURBON, MICHAEL W.</b> , Associate Professor in Design Technology, Program Chair-Assistant Division Chair, Business/Technology Division, Indianapolis BS, Southern Illinois University; MS, Indiana University	<b>HILL, ANN C.</b> , Assistant Professor in Practical Nursing, Indianapolis BSN, St. Louis University, MSED, Indiana University
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<b>DRAGOOG, LOWELL</b> , Instructor in Machine Tool Technology, Indianapolis	<b>HOLLOWELL, RONALD L.</b> , Associate Professor in General Education, Chair of English, Indianapolis BS, University of Indianapolis; MA, Ed.D, Indiana University
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<b>FINNEY, RONALD DEAN</b> , Assistant Professor in Automotive Technology, Program Chair, Indianapolis AAS, Ivy Tech State College; BS, Indiana University	<b>IRWIN, JAMES W.</b> , Assistant Professor in Industrial Technology AAS, Ivy Tech State College; BS, Martin University, MS Oakland University
<b>FLANIGAN, WILLIAM T.</b> , Assistant Professor in Industrial Technology, Program Chair, Indianapolis BS, Tri-State University; MS, Indiana Wesleyan University	<b>JABLONSKI-POLK, TERESA</b> , Associate Professor in Human Services, Program Chair, Indianapolis BA, University of Kentucky; MSW, Washington University
<b>FLICK, DANIEL</b> , Instructor in Machine Tool Technology, Indianapolis BA, Indiana University	<b>KAVANAGH, L. KAY</b> , Associate Professor in Radiologic Technology, Indianapolis BA, Marian College; MS, Indiana University
<b>FLUHARTY, LINDA KAY</b> , Assistant Professor in Nursing, Indianapolis BSN, University of Evansville; MSN, Indiana University-Purdue University at Indianapolis	<b>KECK, ROBERT JOE</b> , Professor in General Education, Indianapolis BS, University of Southern Indiana; MS, Indiana State University; MS, College of St. Francis
<b>FOX, ALISA</b> , Instructor in Visual Communications, Indianapolis BA, Nebraska Wesleyan University	<b>KINKADE, VINCENT D.</b> , Associate Professor in Hospitality Administration, Program Chair, Indianapolis AAS, Ivy Tech State College; AOS, New England Culinary Institute; BA, Hanover College; MBA, University of Indianapolis
<b>FOX, MELINDA</b> , Associate Professor in General Education, Chair in Mathematics, Indianapolis BS, MS, Indiana State University	<b>KOLLER, ANGELA M.</b> , Assistant Professor in Practical Nursing, Indianapolis BSN, Purdue University
<b>GORSLINE, MICHAEL D.</b> , Associate Professor in General Education, Indianapolis BA, Indiana University; MA, Ball State University	<b>KRAMER, JANET A.</b> , Associate Professor in Nursing, Program Chair, Indianapolis BSN, Ursuline College; MSN, University of Akron
<b>GRAY, HARRY E.</b> , Assistant Professor in Accounting, Indianapolis BS, Butler University; CPA	<b>KUCHLER, STEPHEN</b> , Assistant Professor in Electronics, Indianapolis BS, Purdue University; MS, Indiana University

LAND, CHRIS, Assistant Professor in General Education, Indianapolis  
 BS, MAT, Purdue University

LEE, KATHLEEN, Professor in Respiratory Care, Program Chair, Indianapolis  
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LEIGH, GREGORY, Assistant Professor in Computer Information Systems, Indianapolis  
 BS, MS, Indiana University

LEVERETTE, DEBRA, Assistant Professor in Office Administrative, Program Chair, Indianapolis  
 BS, Ball State University; MS, Indiana University

LOTFI, ALI, Assistant Professor in General Education, Indianapolis  
 BA, Tehran University; MS, Indiana University

LOUREIRO, ANN, Assistant Professor in Nursing, Indianapolis  
 BSN, Indiana University; MAN, Ball State University

MAGNANT, PETER T., Associate Professor in Health and Human Services, Division Chair, Indianapolis  
 AA, BS, Indiana University; BA, St. Mary's College; MS, EdD, Indiana University

MASSEY, CONCHITA, Assistant Professor in Practical Nursing, Indianapolis  
 BSN, Indiana University; MAEd, Ball State University

MEEK, MARY E., Assistant Professor in Nursing, Indianapolis  
 ASN, University of Indianapolis, BSN, MS, Ball State University

MILLER, DAVID E., Associate Professor in Electronics Technology, Program Chair, Indianapolis  
 AAS, Ivy Tech State College; BS, Purdue University; MS, Indiana State University

MILLER, SUSAN B., Assistant Professor in Basic Skills, Indianapolis  
 BS, MS, Indiana University

MILLINER, SEAN, Instructor in Computer Information Systems, Indianapolis  
 BA, Glenville State College

MOMAN, FRANKIE L., Assistant Professor in Computer Information Systems, Indianapolis  
 BS, Murray State University; MS, Oakland City University

NEALON, RAYMOND F., Assistant Professor in Business Administration, Program Chair-Assistant Division Chair, Business/Technology Division, Indianapolis  
 BS, St. Lawrence University; MS, Indiana Wesleyan University

niebauer, DANIEL J., Instructor in Automotive Technology, Indianapolis  
 AAS, Ivy Tech State College

NOE, J. STEPHEN, Instructor in General Education, Indianapolis  
 BS, University of Notre Dame; MS, Illinois State University

O'HAVER, MICHAEL PATRICK, Instructor in Automotive Technology, Indianapolis  
 AAS, Ivy Tech State College

PARHAM, BEVERLY K., Associate Professor in Practical Nursing, Indianapolis  
 ASN, University of Indianapolis; BS, Oklahoma State University; MSED, Indiana University

PEREZ, JOHN, Instructor in Visual Communications, Indianapolis  
 BA, Ball State University

PETTIT, JAMES E., Assistant Professor in Industrial Technology, Indianapolis  
 BS, Martin University

REALEY, MINERVA ANNE, Assistant Professor in Practical Nursing, Indianapolis  
 BSN, MSN, Indiana University

REKLAU, MARYANN A., Assistant Professor in Nursing, Indianapolis  
 ASN, Staten Island Community College; BSN, MSN, Indiana University

RICE, MARY KATHLEEN, Assistant Professor in Basic Skills, Indianapolis  
 BA, MS, Indiana University

SCOTT, LINDA L., Associate Professor in Accounting, Program Chair, Indianapolis  
 AS, BS, MA, Ball State University

SENSENBRENNER, OWEN L., Assistant Professor in Industrial Technology, Indianapolis  
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SHARON, STEPHEN, Assistant Professor in Industrial Technology, Indianapolis  
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SISEL, ANN, Assistant Professor in Radiologic Technology, Indianapolis  
 BS, Marian College-Fond du Lac, Wisconsin

STONE, DIANE, Assistant Professor in Business Administration, Indianapolis  
 BS, Indiana Wesleyan

STOWE, MARCUS D., Assistant Professor in Respiratory Care, Indianapolis  
 AS, Indiana University; BS, St. Francis University; MS, Indiana University

TARRICONE, BONNIE, Assistant Professor in General Education, Indianapolis  
 BA, Wheaton College; MA, The William Paterson College of New Jersey; PhD, Indiana University

TEEGUARDEN, JANET, Assistant Professor in General Education, Indianapolis  
 BA, DePauw University; MS, Indiana State University

THOMAS, MARGARET S., Assistant Professor in General Education, Indianapolis  
 BS, Winthrop University; MA, Indiana State University

TRUSTY II, RICHARD T., Assistant Professor in Design Technology, Indianapolis  
 BS, Purdue University

WALLACE, MICHAEL LEE, Assistant Professor in Industrial Technology, Indianapolis  
 BA, Marian College

WARD, DENISE, Assistant Professor in Practical Nursing, Indianapolis  
 ASN, Indiana University; BSN, Indiana University-Purdue University at Indianapolis

WHITENECK, THOMAS, Assistant Professor in Business Administration, Indianapolis  
 BS, MS, Purdue University; MBA, San Diego State College

WHITFIELD, WILLIE, Assistant Professor in Human Services, Indianapolis  
 BA, MS, Alabama A & M University

WOOD, CHRISTOPHER, Professor in General Education, Indianapolis  
 BA, MA, Indiana University

WOOD, ROBERT, Assistant Professor in Visual Communications, Program Chair, Indianapolis  
 BS, Pittsburg State University; MA, Ball State University

WRIGHT, KENTON D., Assistant Professor in Design Technology, Indianapolis  
 BS, Purdue University

WURTZ, ROBERT L., Assistant Professor in Design Technology, Indianapolis  
 AS, BS, Purdue University; MS, Indiana State University

## REGION 9

### OFFICERS

## FACULTY

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BS, Indiana Wesleyan University; MS, Ball State University; RN

**AYTON, EUGENE G.**, Instructor in Business Administration, Program Chair, Richmond  
BS, Morgan State University; MA, Ball State University

**BECHTEL, BARBARA E.**, Assistant Professor in Practical Nursing, Richmond  
BSN, Indiana University; RN

**BERRIER, PEGGY A.**, Professor in Accounting, Program Chair, Richmond  
TC, Sumter Technical College; AAS, Ivy Tech State College; BS, MS, Ball State University; CPA

**BLAKELY, CURTIS**, Assistant Professor in Computer Information Systems, Program Chair, Richmond  
AS, BS, Indiana University

**BOND, IDRIS**, Associate Professor in Medical Assistant, Division Chair, Richmond  
BS, MS, Indiana University; RN

**BRUSTKERN, MAUREEN E.**, Associate Professor in Child Development, Program Chair, Richmond  
BS, Ohio State University; MS, Wright State University

**CLINE, GLENDA**, Instructor in Practical Nursing, Richmond  
BS, Indiana University East

**DAVIDSON, JAMES E.**, Assistant Professor in General Education, Program Chair in Language Arts and Humanities, Richmond  
BA, Hillsdale College; MA, New York Institute of Technology

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AAS, Ivy Tech State College; ASE Master Mechanic; Master Machinist

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AAS, Ivy Tech State College; BS, MS, Indiana State University

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BA, Otterbein College; MAT, Webster University

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BS, Ball State University

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**OLER, RONALD**, Instructor in Office Administration and Electronics Technology, Program Chair, Richmond  
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**RICE, STEPHANIE L.**, Instructor in Medical Assistant, Richmond  
AS, BS, Ball State University

**ROETTGER, RANDALL**, Instructor in Industrial Technology, Richmond  
AS, Vincennes University; BS, Indiana State University

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**WARO, BARBARA**, Instructor in Practical Nursing, Richmond

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**WHITE, JUDITH A.**, Associate Professor in Practical Nursing, Richmond

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## REGION 10

### OFFICERS

**BURGHAM, DOUGLAS**, Chancellor, Columbus

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**GAUDIN, ANTHONY J.**, Dean of Academic Affairs, Columbus

BA, MS, PhD, University of Southern California

**CASEY, LUCINDA**, Dean of Student Affairs

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## FACULTY

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BA, Indiana Central College; MA, University of Indianapolis

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BA, Muskingum College

**ATKINSON, MICHAEL**, Associate Professor in General Education, Columbus

BS, Indiana University; MA, EdD, Ball State University

**BARNES, ROSALIE**, Professor in Office and Information Systems, Department Chair, Columbus

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**CANINE, JILL**, Professor in Computer Information Systems, Columbus  
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**CARPENTER, LORENE**, Instructor in Practical Nursing, Columbus

ASN, Youngstown State University; BSN, University of North Carolina-Charlotte

**DOUGHERTY, RONALD**, Professor in Business Administration and Accounting, Department Chair, Columbus

BS, Indiana University; MS, Indiana Wesleyan University

**DUAN, XIN-RAN**, Associate Professor in Design Technology, Program Chair, Columbus

BS, Xi'an Jiao-tong University; MS, University of Oklahoma

**FALLON, JAMES**, Instructor in Medical Assistant, Columbus

BA, University of Cincinnati; MHA, Xavier University-Cincinnati

**GILES, CAROLYN**, Associate Professor in General Education and Basic Skills Advancement, Columbus

BS, MS, Indiana University

**GRAUE, GREGORY**, Associate Professor in General Education, Columbus

BS, MS, Indiana University

**HEIWIG, DOUG**, Assistant Professor in Computer Information Systems, Columbus

BA, DePauw University; MBA, Butler University

**JACKSON, ROBERT**, Assistant Professor in Accounting, Columbus

BS, MA, Bowling Green State University

**LAMM, GENEVA**, Associate Professor in Health Sciences, Department Chair, Columbus  
AAN, BSN, MSN, Indiana University

**LEWIS-KILU, ELOISE**, Assistant Professor in Practical Nursing, Columbus  
BSN, Adelphi University

**MILLER-SELLER, M**, Assistant Professor in Design Technology, Columbus  
BS, Purdue University; MS, Indiana State University

**NISSEN, DON E.**, Associate Professor in Visual Communications, Columbus  
BA, Buena Vista College; MA, University of Kansas

**NOLTING, BONNIE**, Professor in Office Administration, Columbus  
BS, MS, Indiana University

**NORRELL, MARY PATRICIA**, Professor in Practical Nursing, Columbus  
BSN, Ball State University; MS, Indiana University

**SIMMONS, SUSAN**, Assistant Professor in General Education, Columbus  
BS, Western Michigan University; MS, Indiana University

**STIDHAM, DANA**, Assistant Professor in Medical Assistant, Program Chair, Columbus  
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**TAYLOR, JUNE**, Instructor in Practical Nursing, Columbus  
BSN, Ohio State University

**WALITZ, SUSAN**, Instructor in Practical Nursing, Columbus  
BSN, Indiana University

**WANG, PEI WEI**, Associate Professor in Industrial Technology, Program Chair, Columbus  
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**WILSON, JONATHAN**, Professor in Visual Communications, Department Chair, Columbus  
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**WINSLOW, MARIBETH**, Assistant Professor in General Education, Department Chair, Columbus  
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## R E G I O N 11

### O F F I C E R S

**HELM, JIM**, Chancellor  
BS, Hanover College; MS, Xavier University

**HEIDERMAN, DON**, Campus Dean/Dean of Student Affairs, Madison  
BA, Indiana State University

**MCCLURE, BILL**, Campus Dean/Dean of Academic Affairs, Madison  
AB, Franklin College; MS, University of Cincinnati

**MOORE, L. JOE**, Dean of Academic Affairs  
AB, PhD, Indiana University

### F A C U L T Y

**ADAMS, CORA**, Instructor in Practical Nursing, Madison  
BS, Indiana University

**ALTHOFF, DOROTHEA**, Instructor in General Education and Support Services, Madison  
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**DAOOSKY, PAUL**, Instructor in Computer Information Systems, Lawrenceburg  
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## REGION 13

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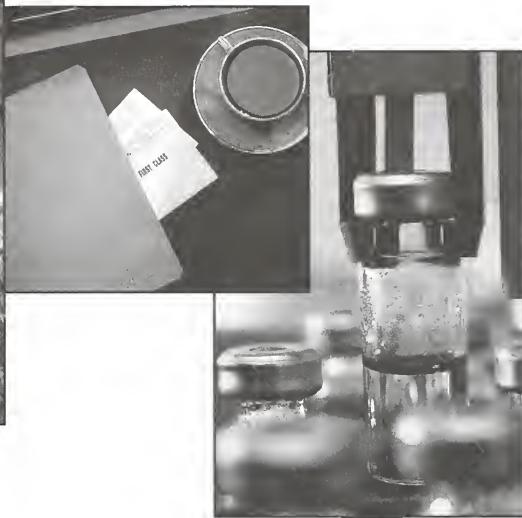
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# Accreditations and Memberships



Ivy Tech State College is accredited by The Higher Learning Commission and is a member of The North Central Association. Other accrediting agencies and affiliates are listed below by regions. The college is a member of the American Association of Collegiate Registrars and Admissions Officers, the American Association of Community Colleges, the Association of Community College Trustees, CAUSE, the National Association of College and University Business Officers, the National Association of Colleges and Employers, the National Association of Financial Aid Administrators, the National Council for Research and Planning, the National Council on Student Development, and the Society for College and University Planning..

**REGION 1 (GARY, EAST CHICAGO, MICHIGAN CITY, VALPARAISO)****Agency**

<b>Agency</b>	<b>Program Area</b>
The American Culinary Federation .....	Hospitality Administration Culinary Arts
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment .....	Medical Assistant
Joint Review Committee for Respiratory Therapy Education .....	Respiratory Care
Accreditation Review Committee on Education in Surgical Technology .....	Surgical Technology
National League for Nursing Accrediting Commission .....	Practical Nursing
Indiana State Board of Nursing .....	Associate of Science in Nursing Practical Nursing Nurse Aide
Indiana State Board of Health .....	Hospitality Administration Physical Therapist Assistant Association of Collegiate Business Schools and Programs .....
National Restaurant Association .....	Accounting Business Administration Computer Information Systems Office Administration
Commission on Accreditation in Physical Therapy Education .....	
Association of Collegiate Business Schools and Programs .....	

**REGION 2 (SOUTH BEND, ELKHART, WARSAW)****Agency**

<b>Agency</b>	<b>Program Area</b>
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment .....	Medical Assistant
National Accrediting Agency for Clinical Laboratory Services .....	Medical Laboratory Technician Phlebotomy Nurse Aide
Indiana State Board of Health .....	Qualified Medication Aide
Indiana State Board of Nursing .....	Associate of Science in Nursing Practical Nursing
Association of Collegiate Business Schools and Programs .....	Accounting Business Administration Computer Information Systems Office Administration
Dietary Managers Association .....	Dietary Manager
National League for Nursing Accrediting Commission .....	Associate of Science in Nursing
Indiana State Emergency Management Agency .....	Emergency Medical Technician, Ambulance
National Institute for Automotive Service Excellence/	
National Automotive Technicians' Education Foundation .....	Automotive Technology
Recreational Vehicle Industry Association .....	Recreational Vehicle Service Technology

**REGION 3 (FORT WAYNE)****Agency**

<b>Agency</b>	<b>Program Area</b>
American Association for Medical Transcription .....	Medical Assistant
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment .....	Medical Assistant
Committee on Accreditation for Respiratory Care .....	Respiratory Care
Association of Collegiate Business Schools and Programs .....	Accounting Business Administration Computer Information Systems Office Administration
Dietary Managers Association .....	Dietary Manager
National Accrediting Agency for Clinical Laboratory Sciences .....	Phlebotomy
National Automotive Technicians' Education Foundation, Inc. ....	Automotive Technology
Council on Hotel, Restaurant and Institutional Education .....	Hospitality Administration
American Culinary Federation .....	Hospitality Administration
National Organization for Human Service Education .....	Human Services
Council for Standards in Human Services Education .....	Human Services
Indiana Association for Home Care, Inc. ....	Medical Assistant – Home Health Care
Commission on Massage Therapy Accreditation (COMTA) .....	Massage Therapy

## REGION 4 (LAFAYETTE)

### Agency

Agency	Program Area
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing Qualified Medication Aide Certified Nursing Assistant
Indiana State Board of Health	Associate of Science in Nursing
National League for Nursing Accrediting Commission	Associate of Science in Nursing
American Dental Association, Commission on Dental Accreditation	Dental Assistant
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
Accrediting Review Committee on Education in Surgical Technology	Surgical Technology
Joint Review Committee for Respiratory Therapy Education	Respiratory Care
Dietary Managers' Association	Dietary Manager
Association of Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
National Institute for Automotive Service Excellence/ National Automotive Technicians' Education Foundation	Automotive Technology

## REGION 5 (KOKOMO, LOGANSPORT)

### Agency

Agency	Program Area
Association for Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
Indiana State Board of Health	Qualified Medication Aide Certified Nurse Assistant
Indiana State Board of Nursing	Practical Nursing
American Design Drafting Association	Design Technology
National Institute for Automotive Service Excellence/ National Automotive Technicians' Education Foundation	Automotive Technology

## REGION 6 (ANDERSON, MARION, MUNCIE)

### Agency

Agency	Program Area
Association for Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
Association for Gerontology in Higher Education	Human Services
Indiana State Emergency Management Agency	Emergency Medical Technician Ambulance/Advance
Indiana State Board of Health	Nurse Aide Qualified Medication Aide
Indiana State Board of Nursing	Practical Nursing
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
Commission on Accreditation in Physical Therapy Education	Physical Therapist Assistant
National Institute for Automotive Service Excellence/ National Automotive Technicians' Education Foundation	Automotive Technology

**REGION 7 (TERRE HAUTE)****Agency**

Agency	Program Area
Association for Collegiate Business Schools and Programs	Accounting
Federal Aviation Administration	Business Administration
Indiana State Board of Health	Computer Information Systems
Indiana State Emergency Management Agency	Office Administration
Indiana State Board of Nursing	Aviation Technology
Commission on Accreditation of Allied Health Education Programs:	Nurse Aide
American Association of Medical Assistants' Endowment	Social Services/Long-Term Care
National Accrediting Agency for Clinical Laboratory Sciences	Activity Director/Long-Term Care
Joint Review Committee on Education in Radiologic Technology	Qualified Medication Aide
National Association of Industrial Technology	Emergency Medical Technician
National Institute for Automotive Service Excellence/	Practical Nursing
National Automotive Technicians' Education Foundation	Medical Assistant
	Medical Laboratory Technician
	Radiologic Technology
	Automotive Technology
	Manufacturing Technology
	Design Technology
	Electronics Technology
	Industrial Technology
	Quality Science
National Institute for Automotive Service Excellence/	Automotive Technology

**REGION 8 (INDIANAPOLIS)****Agency**

Agency	Program Area
The American Culinary Federation Educational Institute	Hospitality Administration; Culinary Arts
American Design Drafting Association	Design Technology
Greater Indianapolis Chapter of the American Culinary Federation	Hospitality Administration; Culinary Arts
Restaurant and Hospitality Association of Indiana	Hospitality Administration
International Association of Administrative Professionals	Office Administration
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
Accreditation Review Committee on Education in Surgical Technology	Surgical Technology
Joint Review Committee on Education in Radiologic Technology	Radiologic Technology
Joint Review Committee for Respiratory Therapy Education	Respiratory Care
The Accreditation Council for Occupational Therapy Education	
of the American Occupational Therapy Association	Occupational Therapy Assistant
Association for Collegiate Business Schools and Programs	Accounting
Council for Standards in Human Services Education	Business Administration
National Association of Industrial Technology	Computer Information Systems
	Office Administration
	Human Services
	Automotive Technology
	Manufacturing Technology
	Design Technology
	Electronics Technology
	Industrial Technology
National Institute for Automotive Service Excellence/	Automotive Technology
National Automotive Technicians' Education Foundation	Associate of Science in Nursing
National League for Nursing Accrediting Commission	Practical Nursing
Indiana State Board of Nursing	Associate of Science in Nursing
	Practical Nursing
Indiana State Board of Health	Certified Nurse Aide
	Qualified Medication Aide
	Nursing Home Activities Director
	Nursing Home Social Services Designee

## REGION 9 (RICHMOND)

### Agency

Agency	Program Area
Indiana State Board of Nursing .....	Associate of Science in Nursing Practical Nursing
National League for Nursing Accrediting Commission .....	Associate of Science in Nursing
Indiana State Board of Health .....	Nurse Aide
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment .....	Medical Assistant
Dietary Managers Association .....	Dietary Manager
Indiana State Emergency Management Agency .....	Emergency Medical Technician, Ambulance Advanced EMT
National Institute for Automotive Service Excellence/	
National Automotive Technicians' Education Foundation .....	Automotive Technology
Association for Collegiate Business Schools and Programs .....	Accounting Business Administration Computer Information Systems Office Administration

## REGION 10 (COLUMBUS)

### Agency

Agency	Program Area
Indiana State Board of Nursing .....	Practical Nursing
Association for Collegiate Business Schools and Programs .....	Accounting Business Administration Computer Information Systems Office Administration
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment .....	Medical Assistant
Indiana State Board of Health .....	Qualified Medication Aide Certified Nursing Assistant Home Health Aide

## REGION 11 (LAWRENCEBURG, MADISON)

### Agency

Agency	Program Area
Indiana State Board of Nursing .....	Associate of Science in Nursing Practical Nursing
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment .....	Medical Assistant
Indiana State Emergency Management Agency .....	Emergency Medical Technician, Basic and Advanced

## REGION 12 (EVANSVILLE)

### Agency

Commission on Accreditation of Allied Health Education Programs:

American Association of Medical Assistants' Endowment .....	Medical Assistant
Accreditation Review Committee on Education in Surgical Technology .....	Surgical Technology
Association for Collegiate Business Schools and Programs .....	Accounting
	Business Administration
	Computer Information Systems
	Office Administration

National Institute for Automotive Service Excellence/

National Automotive Technicians' Education Foundation .....	Automotive Technology
National Association of Industrial Technology .....	Electronics Technology
	Design Technology
	Manufacturing Technology

Joint Review Committee for Educational Programs for the EMT-Paramedics .... Paramedic

Indiana State Board of Nursing.....	Associate of Science in Nursing
	Practical Nursing
National League for Nursing Accrediting Commission .....	Associate of Science in Nursing

### Program Area

## REGION 13 (SELLERSBURG)

### Agency

Indiana State Board of Nursing.....	Associate of Science in Nursing
	Practical Nursing
Indiana State Board of Health .....	Nurse Aide
	Qualified Medication Aide
Indiana State Emergency Management Agency .....	Emergency Medical Technician, Ambulance
National Institute for Automotive Service Excellence/	
National Automotive Technicians' Education Foundation .....	Automotive Technology
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment .....	Medical Assistant
Association for Collegiate Business Schools and Programs .....	Accounting
	Business Administration
	Computer Information Systems
	Office Administration

### Program Area

## REGION 14 (BLOOMINGTON)

### Agency

Indiana State Board of Nursing.....	Associate of Science in Nursing
	Practical Nursing
National League for Nursing Accrediting Commission .....	Practical Nursing
Association for Collegiate Business Schools and Programs .....	Accounting
	Business Administration
	Computer Information Systems
	Office Administration

# Contact Information for Accrediting Organizations

The Accreditation Council for Occupational Therapy Education  
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4720 Montgomery Lane P.O. Box 31220  
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(301) 652-2682

Accreditation Review Committee on Education in Surgical Technology  
7108-C South Alton Way  
Englewood, CO 80112  
(303) 694-9262

American Association for Paralegal Education  
P.O. Box 40244  
Overland Park, KS 66204

American Association of Medical Assistants' Endowment  
20 North Wacker Drive, Suite 1575  
Chicago, IL 60606  
(312) 899-1500

American Culinary Federation Educational Institute  
10 San Bartola Drive  
Saint Augustine, FL 32086  
1-800-624-9458

American Dental Association, Commission on Dental Accreditation  
211 East Chicago Avenue  
Chicago IL  
(312) 440-2915

American Design Drafting Association  
P.O. Box 799  
Rockville, MD 20848-0799  
(301) 460-6875

Association of Collegiate Business Schools and Programs  
7007 College Boulevard, Suite 420  
Overland Park, KS 66211  
(913) 339-9356

Association for Gerontology in Higher Education  
1001 Connecticut Avenue N.W. - Suite 410  
Washington, DC 20036-5504  
(202) 429-9277

International Association of Administrative Professionals  
10502 NW Ambassador Drive  
P.O. Box 20404  
Kansas City, MO 64195-0404  
(816) 891-6600

Business Professionals of America  
5454 Cleveland Avenue  
Columbus, OH 43231

Commission for Hotel Restaurant Institutional Education (CHRIE)  
1200 17<sup>th</sup> Street NW  
Washington, DC 20363

Commission on Accreditation in Physical Therapy Education  
1111 N. Fairfax Street  
Alexandria, VA 22314  
(703) 706-3245

Commission on Accreditation of Allied Health Education Programs  
35 East Wacker Drive, Suite 1970  
Chicago, IL 60601-2208  
(312) 535-9355

Council for Standards in Human Services Education  
Attn: Naydean Blair  
Houston Community College System  
5514 Claire Road  
Houston, TX 77041  
(713) 718-5539

Dietary Managers Association  
One Pierce Place, Suite 1220 N  
Itasca, IL 60143-3111  
(708) 775-9250

Federal Aviation Administration  
Airmen Certification Branch  
P.O. Box 25082  
Oklahoma City, OK 73125-4940

Greater Indianapolis Chapter of the  
American Culinary Federation, Inc.  
1800 E. King Street  
Franklin, IN 46131  
(317) 736-7284

Indiana State Board of Health  
1330 West Michigan Street  
P.O. Box 1964  
Indianapolis, IN 46206-1964  
(317) 633-0100

Indiana State Board of Nursing  
Health Professions Bureau  
402 West Washington Street, Room 041  
Indianapolis, IN 46204  
(317) 232-2960

Indiana State Emergency Management Agency  
302 West Washington Street, Room E-208  
Indianapolis, IN 46204  
(317) 233-6545

Joint Review Committee for Respiratory Therapy Education  
1701 West Euliss Boulevard, Suite 300  
Euless, TX 76040-6823  
(817) 283-2835

Joint Review Committee for Educational Programs for the EMT-Paramedic  
7108-C South Alton Way, Suite 150  
Englewood, CO 80112  
(303) 694-6191

Joint Review Committee on Education in Radiologic Technology  
20 N. Wacker Drive, Suite 900  
Chicago, IL 60606-2901  
(312) 704-5300

National Accrediting Agency for Clinical Laboratory Sciences  
8410 West Bryn Mawr Avenue, Suite 670  
Chicago, IL 60631  
(312) 714-8880

National Association of Industrial Technology  
3300 Washtenaw Avenue, Suite 220  
Ann Arbor, MI 48104-4200  
(313) 677-0720

National League for Nursing Accrediting Commission  
350 Hudson Street  
New York, NY 10014  
(212) 645-9685

National Institute for Automotive Service Excellence/  
National Automotive Technicians' Education Foundation  
13505 Dulles Technology Drive  
Herndon, VA 22071-3415  
(703) 713-0100

National Organization for Human Services Education  
Dr. Marianne R. Woodside  
University of Tennessee, Knoxville  
533 Andy Holt Tower  
Knoxville, TN 37996-0150

National Restaurant Association  
250 S. Wacker Drive, Suite 1400  
Chicago, IL 60606

North Central Association of Colleges and Schools  
30 North La Salle Street  
Chicago, IL 606012-2504  
(312) 263-0456

Recreational Vehicle Industry Association  
PO Box 2999  
Reston, VA 20195-0999  
(703) 620-6003

Restaurant and Hospitality Association of Indiana  
115 W. Washington Street, Suite 1165-S  
Indianapolis, IN 46204  
(317) 673-4211

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# Notes





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